A Lecture ON METALLIC POISONING.

Delivered at the National Hospital for the Paralysed and Epileptic, Queen-square, W.C., on Oct. 22nd, 1901,

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GENTLEMEN,—Metallic poisoning has occupied a considerable amount of public attention during the last year. The epidemic of arsenical poisoning caused by the contamination of beer and the consternation it produced will be fresh in your minds. Many of you may also have noted the efforts which have been made to lessen the amount of lead-poisoning incidental to the process of glazing pottery and the difficulty there is in practical prevention. Such cases of lead-poisoning as occur in trades appeal to the public by their concentration and by the apparent possibility of their prevention. But that which occurs in such industries is but a trifling proportion of the whole amount in the kingdom, most of which occurs among those who are engaged in the work of renewing for us the freshness and fairness of our habitations—the house-painters.

Here, for your observation, are two patients suffering from the effects of lead on the nervous system and I wish to avail myself of their presence to impress upon you some facts regarding metallic poisoning. Some of them they illustrate, others they do not. Both patients exemplify the fact I have just mentioned—both are house-painters. One presents the characteristic effect of the disease—wrist-drop and paralysis of the extensors in the fore-arms—and the other does not. I think I may assume that you are familiar with the features of this paralysis and I need not describe them in detail. Some points will come before us presently. But the case to which I would first and specially direct your attention is that of the patient who has no paralysis. He can move his hands freely and well. He is suffering from various symptoms of feebleness of the nervous system. He is weak generally, although, as you see, he is fairly nourished. He can only walk with difficulty, but there is some cause for this, as we shall see. He complains of numbness at times in the right foot and left thigh. He has had much headache, and when he holds his hands out they present fine tremor, to which we must return. His difficulty in walking is partly due to an injury long ago. In 1888 he sprained his right ankle so severely as to be in the Bristol Royal Infirmary for four months. Some weeks after his discharge he injured the instep on the same side. The injury seems to have led to disease, because he returned to the infirmary and some bone was removed. Contraction in the calf must have followed, for the Achilles tendon had afterwards to be divided. Subsequently a toe was removed—why we do not know. He slowly recovered and was able after a time to resume work, but after working for some time he again lost strength and his left leg became thin. His weakness culminated in an attack of colic. This was six years ago; only after long abstinence from work did he gain enough strength to resume it, with, after a time, a similar result. After another attack of colic a year ago he was so much more feeble that he had to give up and has not worked since. During the last year he has suffered also from much headache and from the trembling of the hands. The weakness of the legs has also become so much worse that he was only able to walk with crutches until he came into the hospital seven weeks ago. Yet apart from the tremor there is little that is objective to correspond to his disability. His knee-jerks are rather active, but he presents no foot-clonus. His left leg is thin and his foot shows traces of the operations he has undergone. His muscular strength is small and movements are rather jerky and not sustained. When I first saw him he had been carefully examined and notes had been taken. I was told that it seemed to be a case of "simple neurasthenia." I looked casually at the bed-card and at once my eye was caught by the record of his occupation, "Painter." I looked from the bed-card to his gums and there I saw written in equally distinct characters the record of the effect of his occupation in a conspicuous lead-line. Further inquiry elicited the fact of the two attacks of lead-colic which I have mentioned, one six years ago and one a year since, but also that he had never suffered from any degree of wrist-drop.

Let me interrupt my special subject for a moment. The history of the word "neurasthenia" is noteworthy. It is a contribution to medical nomenclature which we owe to our Transatlantic brethren, and it attained universal use with the utmost celerity. The concise and concrete character of the word gives it a satisfying definiteness. This depends to a large extent on its classical and somewhat graceful sound. Not only is it graceful to the ear, but it is grateful to the mind of the patient who suffers and longs to know from what, who longs to have a name for that which he, or more often she, feels must be a more definite malady than is suggested by the common-place designation of "nervous weakness." How far the practical utility, which, if low, is definite, has influenced its use I cannot say. But its use has extended far beyond the needs of the patient, and indeed did so from the first. It has firmly established itself in current clinical terminology. But it often tends to be too satisfying. Men are apt to rest on it as they would not on its English equivalent. If they do not actually think that they have found the malady from which the patient is suffering, an influence is exerted on them in that direction of which they are unconscious, which lessens the tendency to go further in the search for the whole morbid state. Words are our servants, but they often exert a very masterly influence upon us, none the less effective because we are not conscious of it. They have also their own vitality, feeble or vigorous, and we have little power to influence their career. This fact has come distinctly within my own experience. I have to confess to the authorship of two words. One, "myotatic," was always a puny infant, and I doubt whether it still maintains an independent existence. The other, "knee-jerk," instantly attained universal use, and, indeed, I think has seemed to most persons to have sprung spontaneously from the thing itself, without suggestion—perhaps the greatest compliment a word can pay. But the general use at once achieved by "neurasthenia" was in spite of a strong objection to it which was felt by many. The Royal College of Physicians of London could not include it in their "Nomenclature of Disease," and yet it is now one of the most common of medical words in every language. It would be instructive in more than one way to have a careful study of the forces which have influenced its career, but that I cannot attempt. We must, I think, admit that not only is it a satisfying word to those who suffer, but it has a certain convenience which has almost compelled many to employ it who at first objected. If I may be pardoned for a partial paradox, its convenience is not the less real because this rests on features that are illusory. Remember that the word is a name which should have little meaning, even to those who use it. You may employ it to collect the symptoms of the case under a general designation, but do not let it cover them as a cloak.

When we had ascertained the facts I have mentioned it was impossible to doubt that the patient was the subject of lead-poisoning or that his symptoms of nervous weakness had the same origin. They had developed after he had passed from the hands of the surgeons and had gained strength enough to resume work. On each occasion it was after he had been at work for some time that he began to fail, lost strength, and suffered from the symptoms you have heard, and each relapse was attended by the colic which demonstrated the action of the toxic influence to which his work exposed him, and emphasised the relation of the renewed weakness to this influence. That this influence is the effective cause of his symptoms, little as they would themselves suggest it, is shown by his history, and it is confirmed in an instructive way by careful observation of his state, especially of two features. The tremor he presents, which I will ask you to note carefully when I have done, is a fine tremor which occurs only on movement, but it differs from the tremor so often seen in hysterical and nervous persons. That is a general irregular movement of the hand and fingers. Here you will observe that there is a quick lateral movement of the fingers, the result of contractions in the interossei. This is a peculiar and unusual feature, suggesting a special cause. Tremor is well known to be a result of lead-poisoning, and you know that it is a characteristic effect of the toxic influence of another metal—mercury. The second indication that he is still suffering

from the influence of lead on the nervous system is very curious. It has been before observed, at least in Germany, but opportunities for detecting it are rare and are still more rarely utilised. You are familiar with the wrist-drop, which is a common effect of lead, the atrophic paralysis of the extensor muscles in the forearm. A good example of it is presented by the second patient before you. Such wrist-drop is due to neuritis and is accompanied by the characteristic "reaction of degeneration" to electricity—loss of faradaic and increase of voltaic irritability, and to the latter a change in polar response. In health, contraction occurs to a weaker current with the kathode, the negative pole, than with the anode, the positive pole. In the reaction of degeneration this order is reversed, the contraction occurs more readily with the anode. In this patient we found this polar change in all the muscles that would be affected in wrist-drop and in no others, although it was the only change in reaction that could be detected. All the other muscles of his limbs, including those of the legs, presented the normal order of response. I am sorry—I was going to say—that you cannot see this. He has improved so much during the last few weeks that on one side the order of polar response has become normal, and on the other side is on the way to be so, for the response is now equal to each pole. When he came in the lead in his system must have exerted a definite influence on the nerve-endings in these muscles: he must have been on the verge of wrist-drop. This condition thus affords us additional evidence of the present action of lead on his nervous system.

My object in showing you this case is that it may impress on you the great variety of symptoms to which lead may give rise and the importance of not overlooking the cause in consequence of the equivocal character of the effects. The variety of disturbance of the nervous system which lead may produce is very great. Indeed, you might be prepared for this when you remember how wide and severe are the effects of acute lead-poisoning, how gravely the brain itself suffers in some cases, manifested by what is called "saturnine encephalopathy," often attended by optic neuritis. In more chronic cases the symptoms seem to depend on the momentum with which the poison acts and on the predisposition which the individual possesses. Let me enumerate those derangements which I remember to have met with. Lead may cause not only the common peripheral neuritis but a slower chronic atrophy of the muscles, seen first in the interossei; it is precisely like spinal atrophy, and probably such, but differing in that it does not progress if its cause ceases to act, although it is far more enduring than the wrist-drop; it may be permanent, though it does not increase. Lead may cause some forms of sclerosis of the cord, usually slight in degree; it may cause optic nerve-atrophy; and many forms of functional disorder may result from it. It may cause tremor, as you see in this patient; chronic convulsions, like those of epilepsy; and hysteria, with its varied manifestations, in predisposed subjects. Neuralgia, sometimes of great severity, may be due to it, and headache is a frequent effect, as well as the symptoms of general nervous weakness. In all such cases, in which there is nothing in the symptoms to suggest the cause, this may escape you, unless you are put upon its track either by the occurrence of other associated cases of lead-poisoning, by the occupation of the patient, or by the presence of its great sign, the lead-line on the gums. Let me dwell briefly on the line, because thereon hangs one of my lessons. It is typical in proportion as it approaches Euclid's definition of length without breadth, always provided it is black. It is said to be blue, but I have never myself been able to see any colour in it. It is not always to be seen and often it is not to be seen readily. You know, or should know, the reason why it may be absent even in the most pronounced cases. It is the edge of the deposit of sulphide of lead beneath the inner surface of the gum, where this is separated from the teeth even in a very slight degree. The sulphur comes from albuminous substances which decompose there. Sometimes you see a similar deposit in the mucous membrane of the lower lip, when there is tartar on the teeth with which it comes in contact. Tartar contains organic substance mixed with earthy salts from the saliva and it yields enough sulphur to act on the lead. We have not this deposit in the patients here to-day. But I should like you afterwards carefully to compare the line which is present in each. In the first it is conspicuous, but it is not continuous; it is in separate pieces, where the gums are more detached. The second patient has always been particular about his teeth and careful about cleanliness—hence the detachment of the gums is slight; and although the line is present everywhere it is extremely narrow and only seen on looking closely. Indeed, it was altogether missed at first. When looking for a lead-line use your ophthalmoscope lens, which I presume you are never without. Careful as this patient has always been, he must have gradually accumulated lead in his system, but his final breakdown, with the wrist-drop which you see, he attributes to a cause which it is well to note. He ascribes it, apparently with reason, to the work of painting some ceilings. In this work the man who paints has to stand below that which he is painting, and it is impossible for him to avoid inhaling some of the spray which his brush necessarily throws off—spray which may be loaded with lead. It must be the most perilous form of painting. I wish that the rich who indulge in the luxury of painted ceilings knew at what price it has to be paid for, not by them, but by those who produce the special beauty they desire. I think that house decorators ought to make the fact known to those who ask for this superfluity, for such it certainly is.

But I have not quite done with the lead-line. Far more common than the rare cases in which it is quite absent are those in which it exists only in fragments, often much smaller and fewer than in this patient. It may be at only two or three isolated spots or on the tips of the projections of gum between the teeth. It can then only be found by a most careful and thorough search on the upper jaw as well as the lower. But remember that the smallest fragment, if distinct, is as significant as the most extensive deposit. A year or two ago a patient came to me from the other side of the world and said that he was suffering from muscular wasting. I found considerable atrophy of the muscles of the forearms, but it was of the muscles that suffer in lead-poisoning, with characteristic wrist-drop as its result. No others were affected. They had lost faradaic irritability and presented very little voltaic irritability, but this is common after a time in such cases if voltaic electricity has not been applied. The excitability to voltaism quickly improves in this state after a short course of treatment with it. The onset had been subacute, just as it commonly is from lead. Of course, I at once examined his gums. At first sight they seemed normal, but on more thorough inspection, and especially on examining the gums of the upper jaw, several spots were found at which there was a slight separation from the teeth, and there I found two or three indubitable fragments of lead-line. I afterwards also found some black points at the ends of the projections between the teeth of the lower jaw. I could ascertain no source for the poisoning. The patient was a grocer, but had not for years been accustomed to handle the lead-paper by which tea is protected. Still, I could not doubt that he was suffering from simple lead-palsy, and I therefore felt justified in giving him a very hopeful opinion, a prospect of steady although slow improvement under treatment. The forecast was entirely justified. He went home in a year's time almost well. But I should not have spoken so strongly had I known what he afterwards told me. After I had expressed my opinion he said that he had been sent to England as a sort of forlorn hope. He had been told that he was suffering from progressive muscular atrophy which nothing was likely to arrest. His own words were that he started under what he "felt to be a sentence of death." Perhaps he exaggerated. It is always well to remember the advice once given by a wise physician: "Never believe anything a patient says that another doctor said." But if he had told me this before, I should have been less emphatic. I should have given him some hope and should have allowed this to be gradually augmented by his experience. It is always desirable to avoid expressing a difference of opinion more strongly than is absolutely necessary. And I heard of it again. But I cannot doubt that the cause of the palsy might have been discovered by a sufficiently minute search, and it is to impress the importance of this upon you that I tell you of the case. It is an illustration of one of the wise sayings which the late Sir William Jenner was wont, I might almost say, to stick into the minds of his pupils, "More mistakes are made, many more, by not looking than by not knowing."

But there is one last resort for the detection of this cause of palsy. If the symptoms are such as to suggest lead, and you are sure that there is no trace of lead-line in any part of the gums, you may feel confident that it is not at work, provided the state of the gums certainly is such as to give rise to it. If the gums are everywhere perfect you cannot feel thus

sure. I have seen saturnine wrist-drop without a trace of line, but there was no room for doubt; the case was one of the many which occurred in Sheffield in consequence of the solvent power of the peaty water upon leaden pipes. Yet we have a source of information. If the case is seen early its nature may be decided by an analysis of the urine, especially after iodide of potassium has been given for a few days. It is a rather troublesome process, needing a large quantity of urine, but it may be decisive. I remember employing it in one case of wrist-drop perfectly like that of lead in distribution, course, and character. The result was negative, and its negation proved only too trustworthy; the extensor palsy was followed by a wasting elsewhere and general rapid progressive muscular atrophy.

I mentioned arsenic as another metallic poisoning which has loomed large in the public and professional eye. The extensive epidemic of arsenic-poisoning in the north has had at least one good result—a vast increase in the general professional knowledge of the subject, so that the facts which were previously familiar to a few are now known to all. But it may still not be quite useless for me to impress on you the need for fixing its signs on your mind, ready for revival, because the need for the knowledge may come when you least expect it. Like lead, it causes neuritis, but arsenical neuritis usually affects the legs before the arms. Moreover, its effects on the nerves vary much; the common palsy may be absent, and the sensory nerves may suffer much or most, and hence the symptoms may be equivocal and even misleading—sometimes, indeed, they may be identical with those of tabes.

Just as the line on the gums is the indication of lead, changes in the skin, especially certain forms of pigmentation, constitute the outward and visible sign of the influence of arsenic, visible at least if you look for them, and a sign if you know what they are like. They have been abundantly described, not only by Dr. E. S. Reynolds of Manchester, to whose perception of their significance we owe the discovery of the cause of the epidemic, but especially by Dr. H. G. Brooke and Dr. Leslie Roberts who have published a very full account of them and their pathology in the *British Journal of Dermatology* for April last. I only propose to mention some salient points regarding the pigmentation. Other changes are also common, especially the thickening of the skin of the palms and soles, but the pigmentation is that which is likely, as a rule, to attract attention, and is of most practical importance. Moreover, this Hospital is the only place at which you are at all likely to become practically acquainted with it. Arsenic alone enables us to prevent or lessen the troublesome eruption which bromide causes, and few patients who take the combination for more than two years escape pigmentation. In one case I was able to discern the precise amount which had been effective. The darkening of the skin was first distinct when the patient had taken liquor arsenicalis for two years in uniform quantities, and the total was 104 grains of arsenious acid, or two grains weekly. Doubtless slight signs of it would have been discerned sooner. But I think that if you look at the neck of many old cases of epilepsy attending here, you will meet with an example before long. The change is most marked on the skin of the trunk, front and back, but it extends to the limbs and also to the neck, where indications of it may be detected with least inconvenience. Given with bromide, arsenic has very little tendency to act upon the nerves, even when a sufficient amount has been taken to cause extreme pigmentation. I have a strong impression that it is most readily produced in those who are most prone to the bromide acne, but the impression must of necessity remain such, because the disposition to the acne leads to the administration of larger doses of arsenic.

Whether or not you are able to become acquainted with the aspect of the skin that is due to arsenic, it may serve you in good stead if you remember its occurrence and certain leading features. The brown pigmentation begins as small spots, which may commence, as I have seen, in spots of congestive redness, and the brown tint succeeds the red. These dark spots sometimes exist alone, more often they are seen chiefly on the outer portions of the most pigmented regions, where the tint is more uniform. The uniformity may be due to coalescence of the spots, but sometimes this diffuse colouration seems the first thing. The tint is that which is called sepia, a warm sepia or cold sepia, according to its duration, to use the terms employed by artists. It is not so dark as the pigmentation of Addison's disease and has not the same distribution. Although it is more marked at places at which there has been pressure, it occurs irrespectively of this and is greatest on the parts of the trunk least affected in Addison's disease. When the small discrete spots coalesce they often leave small areas which are unpigmented and which have a pearly whiteness. Three weeks ago I saw a patient whose skin over the whole trunk was of a deep mahogany colour from this cause, with such white spots scattered over it. He was so prone to the bromide rash that even the dose of arsenic he was taking (seven minims with 25 grains of bromide twice a day) did not suffice to keep him entirely free. But he had been free from fits for 16 months and his parents would not hear of a reduction in either the bromide or the arsenic. The darkening of the skin, they said, was quite unimportant, and that is the common opinion of those who present it when they know its cause. I have constantly to explain to patients its origin and to give them the choice between the bromide spots and the darkening of the skin; there is never hesitation in choosing the latter. The white spots I have mentioned are common and somewhat characteristic, although they are met with in other forms of pigmentation. They have been called "rain-washed" spots from their scattered distribution, but their whiteness suggests a more potent agency than simple washing. I believe that their pearly whiteness is not the effect of contrast alone but that they are actually paler than the normal skin. Why such areas should not only resist the pigmentation but should apparently lose what they possessed, is a mystery which the pathologists have not, I think, explained. But we may note that there seems to be a curious solidarity in these pigmentary processes, in consequence of which excess may entail adjacent deficiency and, I may add, a deficiency may be attended by adjacent excess.

Perhaps you will allow me to digress for a moment to mention to you a very remarkable illustration of the latter fact—increased pigmentation in the vicinity of its diminution. I have described the case elsewhere, but it will probably be new to you. It is that of a man who had traumatic meningeal hæmorrhage over the left hemisphere. As a result of this, during the three days he lived after the injury, the right, opposite half of his brown moustache and beard became blanched so as to be almost white. The hair of the scalp was not affected. The change was watched during life and carefully noted after death. It was like that which has been described as the result of profound emotion, but it was due here to a physical agency. It can only be explained by assuming that the disordered innervation so changed the secretion at the roots of the hair as to produce a material capable of ascending the hairs and discharging their pigment. But after death we noticed another thing, which leads me to mention the case. The very grey, almost white, right half was separated from the natural brown left half by a narrow vertical line, or narrow zone, in the middle line, in which the hair had become almost black. Apparently where the disordered influence ceased in its extreme degree, at the blending of the innervation of the two sides, a change in the pigmentary process had occurred of the opposite character. Mysterious as the fact is, and perhaps impossible to explain, it illustrates the close relation between the *plus* and the *minus* in pigmentary processes. I am not sure that we may not find another illustration of this in some cases of atrophy of the pigment of the choroid adjacent to a spot at which it is collected, and also in the heaping up of pigment in association with areas of atrophy. But this may have another explanation.

To return to my proper subject. I desire especially to fix in your mind the fact of the occurrence of this characteristic pigmentation. Whether or not you are able to become actually acquainted with its appearance, it may chance to be as useful to you as it was to me this year. Last February a young Indian civil servant, a district magistrate, was brought to me by his family medical attendant. He had just arrived in England with symptoms of extensive peripheral neuritis, so severe that he could not stand or walk without assistance. There was much weakness of the legs as well as wasting of the muscles. There was incoördination and absence of the knee-jerks, considerable fibrillation in the wasted muscles of the thighs, and great diminution in electrical excitability, which also presented a peculiarity with which I need not now trouble you. There was also considerable impairment of sensibility to pain and touch. His hands likewise were weak and very unsteady. The illness had followed a sharp attack of intermittent fever two or three months before, and he had previously suffered badly

from the ordinary malarial fever in India. Such neuritis is well known as an occasional sequel to these malarial fevers, caused apparently by a toxin which is left in the system. But in that form the muscles of the lower legs are chiefly affected and incoördination is seldom a prominent symptom. When I came to examine the patient's body I found it covered with pigmentation perfectly like that of arsenic. Indeed, I could not doubt its nature. Of course, I questioned him carefully regarding any possible source of arsenic-poisoning, and especially whether he had taken any tonic containing arsenic. It seemed certain that he had not, and no accidental source could be ascertained. Thus the sequence of events suggested malarial influences as the cause, but it was impossible to misinterpret the declaration so clearly written on his skin of the influence of arsenic. Moreover, another fact was learned which gave support to the cutaneous message. About the time of the commencement of his illness he had an attack of shingles. It is a long time (35 years) since Mr. Hutchinson pointed out that herpes zoster may be caused by arsenic. Hence we were compelled to consider that his condition was due to this, in part or altogether; the facts were too definite, although inexplicable, and we treated the patient accordingly. Six weeks later the medical attendant wrote to me that the mystery was cleared up. News had been received from India of the discovery of a prolonged attempt to kill the patient and his family by the habitual introduction of arsenic into their food. Several members of the family had suffered severely and the nurse had actually died from the poison. Our patient improved steadily, and I saw him a fortnight ago practically well, able to walk fairly and cycle 30 miles. The ataxy had vanished; some blunting of sensibility on the front half of the soles alone remained. He will soon return to his work in India. What is of particular interest, because it relates to a point about which we know little, is that the arsenical pigmentation has almost disappeared.

Another pertinent instance of the revelation which this sign may afford I need only allude to because I have already described it in a volume of clinical lectures under the heading of "Mistaken Diagnosis." The patient came with what seemed to be characteristic symptoms of ordinary tabes—pains, ataxy, and loss of knee-jerk. He came when I could not properly examine him, so I ordered him some medicine containing arsenic and arranged to see him again in a month. Then when I stripped him to test his sensation, to my consternation I found his skin covered with typical arsenical pigmentation. He was a colour-merchant, accustomed to deal in various pigments, but he had also taken for a long time a tonic pill containing arsenic. Both these cases illustrate the tendency of the sensory nerves to suffer under arsenic far more than under lead. The patient recovered and he taught me another lesson. There is evidence that iodide of potassium promotes the elimination of arsenic as well as of lead. The path by which it can pass away is, of necessity, the blood. You know that it is not well to give iodide freely to a patient with recent and severe lead poisoning because the lead stored in the tissues may be thrown into the blood too suddenly. This case showed that we should be equally cautious in the case of arsenic. Iodide in very moderate doses led to such an increase in the symptoms of irritation of the nerves as to compel its discontinuance for a time and very gradual resumption.

I have only one other instance to mention to you and that is an illustration of the other side of the shield. An epileptic patient, a young woman, about 30 years of age, presented marked pigmentation from the arsenic taken with bromide. From the latter she was deriving great good. I explained the nature of the darkening of the skin and she was satisfied. About six months later I received a letter from her sister written in dire distress. The aspect of the skin had caused two medical men to assure her that the patient was certainly the subject of Addison's disease—a progressive incurable malady. I could only reply that the patient when I last saw her presented darkening of the skin due to the arsenic. I heard no more of the case. It is right to say that this was before the Manchester epidemic had its opportunity of exerting its educational influence on the profession.

The facts I have given you are commonplace. Many of them may have been known to some of you, some of them may have been known to many of you; but one fact I am sure is true of all my hearers—for it is as true of myself as of anyone—the commonplace is of all knowledge that which we can least afford to despise or to disregard.

An Introductory Address
ON
HUMAN AND BOVINE TUBERCULOSIS.

Delivered at the Royal Veterinary College, Camden Town, on Oct. 1st, 1901,

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GENTLEMEN,—I esteem it a great honour to have been invited to deliver the introductory address, and it is a sincere pleasure to me as a governor of this college to welcome to-day both new and old students. It is very gratifying to all those who have the interests of this college at heart that the number of students for several years has been so well maintained. I congratulate the new students upon the choice they have made in selecting the veterinary profession as their career in life. I congratulate them also upon the advantages which they will derive as students of this institution. The Royal Veterinary College not only stands in the front rank of veterinary schools in the British Empire, but it compares very favourably with those great institutions in France and Germany which have a world-wide and long-established reputation. In this country great difficulties have to be encountered by those who desire to promote scientific education. There is not the same amount of sympathy and financial support which is given to scientific institutions in America and on the continent. And therefore I feel very strongly that those who are responsible for the management of this college may, considering their limited resources, claim great credit for making the teaching so efficient and for placing opportunities for original research within the reach of both the teaching staff and the students.

With very many parents it is a most difficult matter to choose a career for their sons, and therefore it ought to be more widely known that it is a great advantage for young men to pass through a course of training in a veterinary college. Much might be said with regard to the danger of overcrowding the profession, but I venture to think that there is still plenty of room. The ranks of those engaged in private practice have to be filled up. There is a great demand in the army for thoroughly trained veterinary surgeons. Many members of the profession have rendered splendid services in the great war in South Africa, and if the experience of this war leads to the employment of mounted troops in still greater numbers, if, in other words, horses are destined in future wars to play such a conspicuous part, there must necessarily be a still greater demand for the services of those who have to select and to take charge of them. There is also an increasing demand for veterinary surgeons in the colonies. In South Africa and our other possessions the best methods of stamping-out animal plagues must occupy the attention of the colonial Governments and thus give employment to veterinary surgeons. There must also arise a greater demand at home for their services. The eradication or diminution of such diseases as bovine tuberculosis could only be attempted by the intelligent coöperation of the public with veterinary officers of health.

There are many parents who send their sons to the universities without having definitely settled upon their future career, and many parents who could not aspire to sending their sons to a university would do well to secure the advantages of a scientific education by sending them to a veterinary college. They would receive a sound scientific training, and the fees for the whole curriculum, exclusive of the cost of living, are less than the fees for sending a boy for one year as a boarder to one of the best preparatory schools. If the student did not eventually practise as a veterinary surgeon the time spent in acquiring veterinary knowledge would be by no means lost. Every well-educated man should have some acquaintance with the subjects which are taught at a veterinary college, such as botany, biology, physiology, chemistry, and even anatomy. Anatomy is of special value in training the intellect. It is an exact science, and the mind of the student is not disturbed by new theories and a variety of opinions. It encourages accuracy in

observation, it necessitates an accurate memory, and it trains the hands in delicate operations. As the student passes on to the essentially professional subjects—I mean the recognition, cure, and prevention of the diseases of animals, especially of horses and cattle—it will at once be admitted that there are many occupations in which a knowledge of these subjects can be put to practical account. A student may not ultimately elect to practise; he may prefer to take up farming either at home or in the colonies. He may become an estate agent or be called upon to lead the life of a country gentleman, and perhaps to serve on the "Diseases of Animals Committee" of a county council or other local governing body. In any of these positions the information which he would have received would prove to be of very great advantage.

PRELIMINARY EDUCATION.

In the education of students before they come to the college it is very desirable that attention should be given to foreign languages, especially French and German. Foreign veterinary surgeons have a great deal to learn from our methods, and English veterinary surgeons are equally indebted to the work and experience of their foreign colleagues. Some of the best text-books were written by foreign authors, and if the scientific veterinary surgeon in England wishes to keep in touch with continental opinion, experience, and research work it is an enormous advantage to be able to read the original publications. To depend upon the chance of translation or upon meagre abstracts in English is very unsatisfactory, and many contributions to literature would be quite out of reach. Those who held office as advisers to county councils or aspired to appointments in the Veterinary Department of the Board of Agriculture would appreciate the value of being able to study the reports of the agricultural departments of other nations. The admirable reports of our own Board of Agriculture would at a glance illustrate this point. This is, however, not the only value of a knowledge of French and German. International veterinary and science congresses are becoming more and more popular. The opportunities for exchanging opinions and experience with other nations are increasing, and the hard-worked veterinary surgeon might combine with the enjoyment of travelling the opportunity for exchanging ideas with his professional brethren by attending these congresses in foreign countries.

I do not require to be told that the veterinary surgeon has to think first of making a living—I am quite aware of that fact; but it must be remembered that travelling on the continent is a very different matter from what it was 20 years ago. The expenses have been reduced to such an extent by coöperation that an opportunity for foreign travel is placed almost within the reach of all. I would not even leave out the students; I should like to see parents encouraging the idea of "students' coöperative tours," thus enabling them to combine a little sight-seeing and the enjoyment of travelling with a visit to the museums and laboratories and school buildings of such institutions as the great Veterinary School of Alfort, near Paris, the Veterinary School at Berlin, the Pasteur Institute in Paris, and the Hygienic Institute at Berlin, where diseases common to man and to lower animals are constantly the subjects of investigation. Travelling scholarships would be of quite as much advantage to veterinary as to medical students.

HIGHER EDUCATION.

I do not propose to discuss the question of the higher education of veterinary students, but I trust that I may be forgiven if I again allude to a subject which I referred to on a similar occasion many years ago—I mean the desirability of conferring a degree in veterinary science. I desire to draw the attention of the leaders of your profession to this question—Why should not the Veterinary College be recognised in the new University of London? I would also again point out what a great advantage it would be both to veterinary surgeons and to the public if the Royal College of Veterinary Surgeons could see their way to instituting a special examination and conferring a Diploma of Preventive Veterinary Medicine. The course of training should be somewhat similar to the course of instruction given to medical men for the Diploma of Public Health. I hope to see the day when every county council and every rural and urban council will appoint a veterinary officer of health, and every applicant for such a post be required to hold the Diploma of Preventive Veterinary Medicine. I hope that in the future more veterinary surgeons will be placed in a position which will enable them to devote their lives to original research. There is an enormous field for investigation in the causation and prevention of diseases of animals.

TUBERCULOSIS.

It would be impossible to give a better illustration of this fact than by referring to tuberculosis in animals, especially cattle. At the recent International Congress in London the relation of bovine tuberculosis to human tuberculosis was prominently brought forward in a paper read by Dr. Koch, and the question is of so much importance that the Government has appointed another Royal Commission to inquire into it. The governors, the staff, and the students of this college are all, I am sure, very proud of the fact that the researches made by your distinguished principal and the great reputation which he has made by his knowledge of comparative pathology have led to his selection as a member of this most important Commission.

It is instructive and encouraging to the veterinary profession to know that the researches which created most interest at the Congress were those undertaken in different veterinary colleges. Dr. Koch's experiments were carried out during the past two years with the coöperation of Professor Schutz in the Veterinary College at Berlin. It is necessary to refer to these researches in some detail to explain the point at issue and to compare the work and conclusions of Dr. Koch with the experiments and opinions of others who have investigated this subject. Dr. Koch in various ways inoculated 19 cattle with human tuberculous virus and none of them showed any symptoms of disease. On the other hand, cattle inoculated with bovine tuberculosis suffered, without exception, the severest tuberculous disorders of the internal organs. Dr. Koch concluded that human tuberculosis differed from bovine and could not be transmitted to cattle, and he further announced that whether man was susceptible to bovine tuberculosis at all was not yet absolutely decided, and that if such susceptibility really existed the infection of human beings was but a very rare occurrence. Dr. Koch believed that the extent of the infection by the milk and meat of tuberculous cattle and the butter made of their milk was hardly greater than that of hereditary transmission, and therefore he did not deem it advisable to take any measures against it. I must express myself in full agreement with Dr. Koch that if infection occurs at all it is of very rare occurrence, but I entirely disagree with the statement that human tuberculosis cannot be inoculated in cattle, and I must add that I consider Dr. Koch's statement with regard to preventive measures as singularly unfortunate. It conveys the impression, as pointed out by Dr. Hueppe, that Dr. Koch would have us concede to dairymen and milk-sellers the right of selling tuberculous milk. I feel justified in disagreeing with Dr. Koch on these points because in the course of an inquiry on "Tuberculosis in Relation to the Public Milk-supply" which was published in the report of the Board of Agriculture for 1888 I made the following experiment. A perfectly healthy calf was inoculated intra-peritoneally with very virulent human tuberculous sputum and the result was extensive tuberculous deposit at the point of inoculation with hundreds of tuberculous new growths extending from it. The calf died from blood-poisoning 42 days after inoculation and sufficient time had elapsed for the most pronounced infection of the peritoneal cavity. On microscopical examination extremely minute tubercles were found disseminated throughout the lungs and liver. Long and beaded bacilli of the human type were found in these organs and in the peritoneal deposits. This experiment was also made in a veterinary college. It was made in the institution in which we meet to-day, thanks to the great interest taken in the investigation by your former Principal, Sir George Brown. There was no need for me to repeat this experiment as it was absolutely conclusive, and it does not require any Royal Commission to verify the result. Other investigators in England and America have already confirmed this experiment. Dr. Sidney Martin, in experiments on behalf of the Royal Commission on Tuberculosis, succeeded in infecting cattle with human tuberculous virus. In Experiment 1 four calves received with their food sputum from two cases of pulmonary tuberculosis in man. One calf killed in about four weeks showed 53 nodules of tubercle in the small intestine; the second, killed in eight weeks, showed 63 nodules; the third, killed in about 12 weeks, showed 13 nodules; and in the fourth calf there were no nodules

at all. In Calf 3 the nodules in the intestine contained tubercle bacilli. They were absent in the microscopical specimens made of the nodules in Calf 1 and Calf 2, but Dr. Martin pointed out that these nodules were tuberculous although no bacilli were found. In Experiment 2 two calves received at one feeding tuberculous sputum. In one calf killed in eight weeks there were 13 tuberculous nodules in the small intestine and tuberculosis of the mesenteric glands. Tubercle bacilli were found in both sets of lesions. The second calf, killed in about 19 weeks, showed no disease.

Dr. Ravenel, of the Veterinary Department of the University of Pennsylvania, has recently carried out experiments of an equally positive character which he made known at the British Congress on Tuberculosis in London. Four calves were, as in my experiment, inoculated intra-peritoneally with tuberculous sputum. In one case the result was negative, in the other three a post-mortem examination showed that all had become infected with tuberculosis, the lesions in two being quite extensive. On the other hand, calves fed on human tuberculous sputum showed no trace of the disease when they were killed for examination. It is not impossible to explain these contradictory results; they are quite in harmony with the view which I hold that human and bovine tuberculosis are distinct varieties of the same disease. Man is not the natural soil of bovine tuberculosis. The attempts to transmit human tubercle to cattle would not be uniformly successful, and experiments which did not entail the direct insertion of the virus into the tissues might fail entirely. It is quite possible that in my successful experimental case the simultaneous production of blood-poisoning diminished the natural resistance of the tissues and rendered the animal markedly susceptible to infection with the virus from a foreign soil. The difference which may exist in the nature of the soil upon which a virus is inoculated must always be remembered. It is well illustrated by the result obtained by the inoculation of human small-pox upon cattle. Cattle do not naturally suffer from small-pox, which is essentially a disease of man, but it can be grafted on bovine tissues in exceptional cases. These experiments are so difficult that many experimenters who have failed have refused to believe in the positive results obtained by others. But variolation of the cow is nevertheless possible, and so marked is the effect of the soil that the highly infectious small-pox of man is transformed into a locally-inoculable, mild, vesicular malady in cattle, and can never again acquire an infectious character. Sheep-pox may be given as another instance. In this case a highly infectious malady in sheep when successfully grafted on human tissues is deprived of its infectious character and reduced to the condition of a mild vesicular disorder.

All tubercle bacilli can be inhaled and taken with food by perfectly healthy individuals without producing tuberculosis, but if from any predisposing cause there is vulnerability of the tissues it is reasonable to be suspicious of bovine bacilli. As human tuberculous virus can be grafted on to the cow, so also there are cases in which bovine bacilli invade the human tissues. I refer to those cases in which there has been direct inoculation of man. Cooks, grooms, and butchers may suffer from tuberculous nodules in the skin containing tubercle bacilli, but they undergo caseation and disappear. I agree with Dr. Koch in the opinion that human infection can only be quite exceptional. If it were not so, owing to the frequency with which tubercle bacilli occur in milk, cream, butter, cheese, and the quantity of meat derived from tuberculous cows, the inhabitants of every country in the world in which bovine tuberculosis was prevalent must necessarily have been decimated by tuberculous disease. I do not accept the theory that abdominal tuberculosis in children is due to infection from tuberculous milk. Those who advocate this view would appear to set aside the opportunities for infection from a human source. If tubercle in children is the result of infection of the digestive tract there are plenty of opportunities for self-infection when there is concurrent disease of the lungs and there are obviously many ways by which a child might be infected by the mouth with bacilli from a human source. Physicians who have had enormous experience with tuberculous patients of all ages are by no means ready to attribute consumption in any form to tuberculous milk or meat. Sir R. Douglas Powell in his evidence before the Royal Commission when asked if any danger existed in consuming meat bought in the butcher's shop or in using milk from the milk-pail—i.e., whether the consumption of milk and meat from tuberculous animals might cause the disease in man—replied that he had not met with any cases in his experience which would connect the two facts together. Dr. J. F. Goodhart, consulting physician to the Evelina Hospital for Children, gave similar evidence. I am convinced that any suspicion of danger can be removed without creating a public scare. It is simply a question of better inspection of dairies and any risk which may exist can be met by adopting the precaution in both private and public dairies of destroying "wasters" or "piners" and removing all cows suffering from any disease of the udder. There is no necessity to insist on the boiling of all milk. Unless there are urgent reasons it is not a practice likely to be generally adopted. Boiled milk is very unpalatable to many people and the boiling of milk alters its composition and renders it, in the opinion of many, a danger to infants. Sir R. Douglas Powell and Dr. Goodhart were not prepared to recommend the boiling of milk as a precaution against tuberculosis. Tuberculosis of the bowels is almost unknown in very young children, and it is not very common even in children of from five to 10 years of age. In Dr. Goodhart's experience cases occurring in children with a distinct family history of tubercle were very widely spread, and it was quite common to find children becoming tuberculous after measles, bronchial pneumonia, whooping-cough, and intestinal catarrh.

As regards any danger from tuberculous meat it is, in my opinion, practically *nil*. I do not believe that there has been a single case recorded of tuberculosis contracted by eating tuberculous meat. Jews have a very thorough system of meat inspection and yet they are by no means free from tuberculosis. When travelling in the West Indies I found that tuberculosis was by no means uncommon among negroes, and Dr. A. D. Williams of Demerara stated before the Commission that Hindoos and negroes suffered severely. Dr. Williams said that the Hindoos eat very little meat of any kind. The negroes also eat meat in very small quantities, either salt beef or salt pork imported from America, and this is well cooked before it is eaten. They lived for the most part in small and badly-ventilated buildings. Negro children suffered from tubercle. They did not have as much milk as they ought, and usually, owing to the climate, the milk was boiled.

I think that we are justified in concluding that if the carcass is well nourished the meat is perfectly wholesome in spite of the existence of local deposits of tubercle in the organs and glands, which should of course be condemned. The view that an animal in prime condition but with a minute tuberculous nodule was a diseased animal and that the carcass ought therefore to be destroyed was a very extreme view and could not be carried into practice. As a matter of fact, there could be no justification for wholesale destruction of such valuable food. Compulsory destruction of every animal with a tuberculous deposit would almost involve the ruin of the agricultural industry, and it would be quite inconsistent with the continued use of meat imported from countries where such drastic measures were not entertained. No Government would face the question of compensation for every case of tuberculosis, however slight the lesion. It would be quite as reasonable to demand the destruction of the carcass of every animal suffering from an actinomycotic tumour. Actinomycosis is not only prevalent in cattle, but, like tuberculosis, it is also a disease of the human subject. In this country, in America, and in Australia it is still commonly known as "cancer." Cancer of the tongue, cancer of the jaw, cancerous polypus, and cancerous sores are different manifestations of actinomycosis. Quite recently a correspondent in the *Times* has suggested that eating the flesh of such animals may account for the prevalence of cancer in man—a most fallacious suggestion, for actinomycosis and cancer have nothing in common except the popular and misleading designation. It was at one time thought, as in the case of tuberculosis, that the disease in man is derived from cattle, and I have succeeded in grafting the human disease in a calf. They are, however, in my opinion, distinct varieties and I do not accept the theory that men and animals infect each other, but I believe they contract the disease quite independently and that the micro-organism is probably derived from cereals. Does the tubercle bacillus, like the streptothrix actinomyces, exist outside the animal body? There are many other questions bearing on the life-history of the tubercle bacillus, its exact rôle in tuberculosis, and its relation to other organisms which are closely allied to it

both as regards morphology, staining reaction, and cultivation, such as the bacillus of avian tuberculosis, the tubercle bacilli obtained from fish and worms, the bacillus of Rabinowitsch from gangrene of the lung, of Marpmann from urine, of Mironescu from human fæces, of Karlinski from nasal secretion, of Rabinowitsch from milk and butter, and of Mœller from timothy-grass and the dust of other grasses. It is to be hoped that incidentally the new Royal Commission will throw some light on these points.

To eradicate tuberculosis in cattle and so to ensure the breeding of perfectly healthy stock, and thus to restore the confidence of the public in the supply of wholesome meat and milk, will be a splendid work for veterinary surgeons to undertake and one to which they must direct all their energies. As regards the prevention of tuberculosis in man that must be left principally to the sanitary inspector and the medical officer of health. We must not concentrate all our energies upon the destruction of tubercle bacilli but rather give more attention to other factors responsible for the causation of tuberculosis. The study of tuberculosis in animals may throw some light on these causes, and experience of the disease in man may assist in elucidating the causes of disease in animals. Tuberculosis is peculiarly liable to occur among birds and animals kept in captivity. Poultry and guinea-fowls are often the subjects of this disease, and ostriches and other birds in the Zoological Gardens become infected. In monkeys in captivity the disease occasionally occurs in an epidemic form. Pheasants in preserves are attacked sometimes in large numbers and rabbits in overcrowded warrens. These instances help to illustrate the view that damp and other insanitary conditions, confinement, overcrowding, defective ventilation, heredity, and breeding in and in were the most powerful factors in rendering the tissues prone to tubercle and a fitting soil for the invasion of the bacilli. We must not omit in the case of man the influence of alcoholism which has been so closely investigated by Dr. Brouardel; the influence of previous illnesses, such as measles and whooping-cough, as urged by Dr. Goodhart; and, lastly, the influence of special trade occupations which involve inhalation of dust of various kinds.

There are two points which I will discuss at greater length—heredity and tuberculosis in children. Heredity is of two kinds: there is hereditary predisposition to the disease and hereditary transmission of the virus. There is an inherited susceptibility or weakness which renders many individuals liable to the development of tuberculous disease. Family history plays a very important part in human tuberculosis. Sir R. Douglas Powell states from his experience that 48 per cent. of the cases in hospital suffering from tuberculosis had a previous history of hereditary tuberculosis. Whether all these cases are cases of hereditary predisposition, or hereditary transmission of the virus, or examples of both, is not determined. I am entirely in agreement with Dr. Klein and Mr. Victor Horsley that in some cases there is direct transmission of the virus and that it may exist for many years in a latent form. Dr. Klein brought this matter very convincingly before the Royal Commission. In connexion with this question of heredity some interesting observations upon tuberculosis in birds have been recorded by Dr. Baumgarten. On a poultry farm a cock developed tuberculosis. All the chickens reared from this cock were tuberculous. There was no evidence that the fowls were infected with either human or bovine tuberculous virus. An identical case occurred on another farm, and these cases have been accepted as evidence of the direct transmission of the virus from the parent bird. Tuberculosis is a rare disease in calves. It seems probable that those cases which do occasionally occur are mostly, if not entirely, the result of hereditary transmission. In discussing the occurrence of tuberculosis in children we may derive some consolation from the immunity of calves. Tuberculosis in children is largely a disease of the poor. It attacks all classes but is extremely common among the London poor and the poor of our overcrowded cities. I would attribute the disease in children to a want of milk rather than the possible occurrence of a few stray bovine bacilli in milk. Plenty of milk, good nourishing food, and better hygienic surroundings will do more to diminish the numbers of tuberculous children than any legislation directed against bovine bacilli. In proportion as the slums are removed from our overcrowded cities and the problem of the better housing of the poor has been solved we may expect to see a steady diminution in the amount of tuberculosis in children. I believe that the infectious nature of the disease has been exaggerated. It is quite possible that the theory is fallacious—I mean the idea that phthisis can be caught like scarlet fever or may be compared to typhoid fever is, I think, a mistake. In typhoid fever epidemics at home, in India, and in South Africa we know that apart from cases of individual insusceptibility we have not to consider any other factors except the introduction of the specific poison of typhoid fever. Those in health and out of health fall victims to the disease if they have taken the poison in water or in food. There is no question at all of hereditary transmission or of predisposing conditions which render the subject susceptible to the poison. At the same time the habit of spitting in public places and railway carriages and other conveyances should be prohibited, and the sputum of phthisical persons should be disinfected. Several years ago I carried out experiments proving that sputum treated with 20 per cent. carbolic acid was rendered quite inert. Guinea-pigs inoculated with the carbolised sputum remained perfectly healthy and all control animals were infected without exception. There is no need to create a panic or raise an outcry for legislation to make spitting in public places a matter to be dealt with in the police-court. That the virus of tubercle scattered far and wide becomes a constant source of danger to all who inhale the air is not a theory which is supported by experiment and experience. Dr. A. Ransome maintains that in a well-ventilated room it is rendered harmless. Tuberculous sputum was exposed in the ventilating shaft of a hospital and proved virulent to rodents, but similar sputum exposed for the same time in Dr. Ransome's room, which was ventilated and well lighted, was absolutely harmless. Dr. Klein placed a number of guinea-pigs in cages in the ventilating shaft of the Bromptom Hospital very many years ago. They were kept there for several weeks and all of them became tuberculous. We must not too hastily draw conclusions from experiments upon small animals such as rodents. In the same institution it was found among all those who had been connected with it—nurses, porters, physicians, surgeons, and so on—that the mortality from consumption was quite within the average of ordinary mortality. I am convinced that if tuberculosis were readily conveyed from person to person that marriage of individuals who become or are consumptive would be a fruitful source of direct infection. We should hear constantly of instances in which married people had infected each other with tuberculosis owing to the opportunities which occur for conveying the disease by the breath and in other ways. It is necessary to lay great stress upon the difference between experimental inoculation and natural infection. I cannot therefore regard tuberculosis as catching in the same sense that scarlet fever is catching, nor can I regard the comparison to typhoid fever as one that is not very misleading.

Those who aim at eliminating the conditions which I have referred to as powerful factors in the production of tuberculosis will render the greatest services in the crusade against tuberculosis in animals as well as in man.

THE VEGETARIAN SOCIETY.—The fifty-fourth annual conference of the Vegetarian Society was held in Manchester on Oct. 21st. At the morning meeting papers were read on various aspects of their subject. Mr. Alfred Russell considered "Vegetarianism and the Humane Spirit." Mr. Albert Broadbent stated that there was scarcely any toothache or neuralgia where whole-meal bread was used and dealt with the investigations of Mr. T. G. Read of the British Dental Association into the decay of teeth, which was said to result from the grinding of flour in roller mills. The public meeting in the evening was presided over by Mr. F. Eustace Miles who on a vegetarian diet said he could keep up training and brain work without regular exercise. The enemies of vegetarianism he considered "included the advocates of the slow-eating diet, no breakfasts, physical culture, and others." The advocates of vegetarianism "should insist on three aspects—the humane, the æsthetic, and the economic." With regard to the first two aspects Mr. J. C. Street said that the vegetarian diet gave "a spiritual clearness of vision that could not be obtained in any other way." The system does not appear to make rapid headway, for after 53 years of existence the society only received 11 associates and 48 members during the last year. It was stated that "a *large number* of distinguished and valued friends in the vegetarian world had died during the year." With all the claims made for vegetarianism this is surely unusual.

ABSTRACT OF A

Presidential Address

ON

VENTILATION.

Delivered at the Annual Meeting of the Incorporated Society of Medical Officers of Health on Oct. 25th, 1901,

BY A. WYNTER BLYTH, M.R.C.S. ENG., F.C.S., F.I.C.,

BARRISTER-AT-LAW; MEDICAL OFFICER OF HEALTH OF THE METROPOLITAN BOROUGH OF ST. MARYLEBONE.

[AFTER saying that he would define ventilation as being not the mere mingling and wafting of aerial mixtures, but the continuous replacement of air more or less vitiated of inhabited rooms or workshops with the purest air attainable, Mr. Wynter Blyth proceeded:]

Unpolluted water-supplies, the prompt removal of all kinds of dirt, excretal or otherwise, and abundance of suitable healthy food are common blessings of civilised communities; but the air of bed-chamber, of dormitory, of living-room, of factory, of workshop, and of meeting-place continues to produce that low state of health which conduces to the spread of tuberculous and other maladies. In these latter days it has come as a revelation and surprise to many that not a drug in the Pharmacopœia, not an animal extract, not one physical appliance with which science has enriched the remedial art, either singly or collectively, is equal in the treatment of tubercle to bathing the lungs and skin in fresh air. The remarkably successful treatment by open air of consumptive maladies must suggest to us, the guardians of the public health, that if air is curative it is also preventive, and that if abundance of pure air can be supplied to each unit of the population the death-roll from phthisis will be so insignificant as to render special sanatoria unnecessary. The problem to be solved is not the changing of air three times an hour in the spacious rooms of the well-to-do, or in large public rooms, or in hospitals, but in the quite small cubes sanctioned by the legislature—spaces of 400 and 300, or even of 250, cubic feet—for, obviously, if the problem is solved for the smaller it is also for the larger space. As the air in the streets of our towns not infrequently contains as much as six parts per 10,000 of carbon dioxide, it follows that this figure cannot be accepted as the standard of impurity for rooms of houses. A preferable standard would be two parts per 10,000 in excess of the outside air.

There are two distinct advances in the theory and practice of ventilation which have been made recently: the one is the publication by the Sanitary Institute of the report of the Cowl Committee; the other is the wide distribution of electric energy, permitting such mechanical appliances as rotating fans to be utilised by ordinary householders. Wherever there is an electric supply mechanical ventilation is cheap and practicable. The work of the Cowl Committee has extended over 25 years and has embraced a large number of experiments with cowls and ventilating shafts under numerous conditions. The results arrived at are, first, that anemometers vary considerably in the information which they record, according to the situations in which they are employed. The same instrument will give an entirely fallacious reading when used in a confined tube, if it has been standardised in a fairly open space. Thus, it was found necessary to standardise the instrument used by placing it in a tube of similar diameter to that in which it was proposed to use it and by passing a known quantity of air through the tube. Secondly, that a properly designed cowl or terminal gives a much better result than an open pipe of the same height and dimensions. As the flow up the pipe depends upon the head and the resistance (the flow being equal to the square root of the ratio of the head to the resistance), it follows that when the outside air is still the head will be so reduced in amount that there will be no appreciable flow of air up the tube. It is evident that when ventilation is wanted least—that is, in time of high winds—the shaft is most efficient; whereas on dull airless days, when ventilation is most required, the shaft is least efficient.

[Mr. Wynter Blyth condemned many forms of window appliances and even some forms of Tobin's tubes as being unsatisfactory from the disagreeable shower of cold air to which inmates of rooms so fitted were subjected. Tobin's tubes were, however, capable of improvement and might be placed in such positions as would prevent any person's head being exposed to the downpouring cold air. Satisfactory results were to be obtained by the use of ventilating grates, especially in winter, when a large body of comfortably-warmed air might be cheaply supplied. The current in its passage caused a variety of eddies and currents and mixed up the air of a room in such a way as to make its composition more uniform. Mr. Wynter Blyth then detailed a number of experiments which he had made to show how important it was to have inlets and outlets properly placed. He continued:]

If, for example, the inlet be placed on the same level with an outlet the air may blow right across without affecting the main body of air in the room. The generally received doctrine of placing inlets for natural ventilation some four or five feet high, with openings towards the ceiling and outlets near the ceiling or at the ceiling, is in the main correct, but where there is excessive floor pollution, as in the day wards of idiot asylums, if mechanical ventilation is employed and warm air is driven in then it is best to make large openings on a level with the floor and so sweep away offensive odours. Even with natural ventilation it is certainly useful in such cases to have openings on a level with the floor, closed at will, so as to allow fresh air to stream freely over the surface. The great principle in ventilation is to remove polluted air as quickly as practicable, and that is best done by having the exit openings as close as possible to the localities where the air is polluted. Such a position chosen systematically is not possible with natural ventilation; it is only possible with mechanical ventilation.

MECHANICAL VENTILATION.

Whenever it becomes a question of difficult ventilation, such as in mines and underground places, it is the practice to use some form of mechanical ventilation, and, as already mentioned, the spaces for habitable rooms and working places sanctioned by law are so small and inadequate for the purposes of health that ordinary ventilating appliances dependent on the action of so-called natural ventilation do not effect their object. There are many forms of mechanical means of producing a "head," as, for example, by steam or water-jets, by punkahs, by large machines of the bellows type, and so forth, but the only form applicable generally is by means of rotating fans. Mechanical ventilation is almost synonymous with ventilation by the aid of fans, although not entirely. The applications of fans are numerous and important. A fan may be used to drive soot-free and dirt-free air through filtering media into inhabited rooms on foggy days, or it may extract smoky or offensive air from such places as smoking-rooms or lavatories. Fans have been applied for quite a century in certain trades to blow or suck away noxious dusts, or to similarly deal with injurious gases. In principle all the fans are identical. A number of vanes are attached to an axle. When the fan rotates the particles of air slip along the vanes on the tips, and leave the tips at a tangent with almost the velocity of the tips themselves. There is, therefore, a motion of air from the centre to the periphery and a diminution of pressure at the centre or axis. During hot summers electric fans may be seen rotating rapidly in many shops in the metropolis on the counter and worked from the ordinary electric supply. Applied in this way the air leaves the wheel at all points of the periphery tangentially and merely aids the local circulation. To obtain the full effect such a fan must be inclosed in a circular cover with openings at the axle and a tubular aperture at the periphery. In this way delivery may be made to take place along the tube. In the near future, without doubt, the cost will be much reduced, as there is a tendency to cheapen generally the transmission of current as the processes for the production and transmission of electrical energy become perfected. Nor is the motive power applicable to the moving of a fan restricted to the electric current. Advantage in large lavatories, and in places where there is abundance of water running to waste, has been taken of the flow of water. In factories where steam-power is available fans may be run at a cost scarcely appreciable. It is possible, also, that such a cheap agency as petrol, already so extensively employed to propel motors, could be applied in private houses to drive fans.

VENTILATION OF SEWERS BY MEANS OF FANS.

Hitherto the ventilation of sewers, whether by open gratings, or by shafts, or by lamp-columns, has been unsatisfactory. What are sewers but a network of miniatur-

mine galleries? Mines may and are ventilated perfectly by mechanical means, and I have the utmost confidence that the problem of sewer ventilation is capable of being solved by a suitable arrangement of fans driven by electric or other power. It was therefore with some considerable interest that with the assistance of Mr. Meredith Wynter Blyth an investigation was made of a small experimental plant laid down in West Ham by Messrs. Aldous of Forest Gate. Here a 12-inch fan electrically driven (1400 revolutions per minute) sucks the foul gases from a network of two miles of 12- and 15-inch sewers at the rate of 14,400 cubic feet per hour. Observations were made at a manhole 550 feet from the fan and at another manhole 1300 feet from the fan. The sewers in each case were about half full. The air in both sewers was so excessively foul as to be nearly irrespirable before the fan was allowed to run. The temperature in both sewers was 59° F., the outside air being 56·3°. There was insufficient air-current to move the vanes of an air-meter. Every few yards along these sewers there are open ventilators in the centre of the roadway; in each of these there appeared to be a feeble up-current. Samples of the sewer air were taken and the carbon dioxide was found to be a little over 19 per 10,000. The fan was now allowed to run nearly an hour and the two sewers were again examined. Although the fan was running at full speed there was again insufficient current to move an anemometer; but the odour, still strong, was certainly somewhat less; the temperature in each case was lower, showing that cool air had been sucked in, and the carbon dioxide had sunk in the one case to about 16 and in the other to 18·5. These results were quite as good as could under the circumstances be expected. To plant a fan down, as in this instance, in the centre of a network of sewers without closing up a single ventilator is to court failure. If sewers are to be ventilated by fans the best results will be obtained by using more than one fan; there should be mechanical contrivances for driving the air in and also for extracting the air, but more than all the area to be ventilated should be carefully prepared by stopping all ventilating shafts save those that deliver to or exhaust air from the sewers. Besides which resistances should be in certain places interposed where either ventilation was but little required or where the current was flowing at the expense of other pipes where the current was too weak. In short, the whole thing requires to be carefully engineered. Nevertheless, the installation amply proves that fan ventilation of sewers is practicable, that even such a crude installation exercises an appreciable effect on the sewer air, and there is no reason to believe that it would be too expensive. In cases, indeed, where the local authority owned an electric plant the maintenance of a few fans in certain portions of the sewer system could not be a serious matter.

VENTILATION OF THE CENTRAL LONDON RAILWAY.

An example of mechanical ventilation with which everyone must be familiar is afforded by the Central London or Tube Railway. The railway consists of two tubes, for the most part parallel to each other, 10,163 yards in length, 11 feet 6 inches in diameter, from Shepherd's Bush to the Bank. There are 13 stations, each station being constructed of cast-iron tubes 21·5 feet in diameter and 325 feet in length, one such enlarged tube being for the up and the other for the down line. Considering that the whole of the line and the stations are built up of iron pipes embedded in the clay at a depth of from 60 to 90 feet all the air must be renewed from the upper surface of the ground, hence the conditions are quite similar to that of the gallery of a mine with various shafts along its course. The trains fit the tunnels fairly closely; at the sides there is only an interval of a foot, the top of the carriage is but eight inches from the top of the tunnel, while the bottom stands two feet from the roadway. Owing to this arrangement the tubes practically consist of two large air-pumps, the trains being so many pistons, the one set of pistons moving in one direction, the other set in the opposite direction.

[Mr. Wynter Blyth and Mr. M. Wynter Blyth had made a series of observations on the ventilation of the tubes. Some of the experiments were made at Bond-street Station which stands about midway between the termini, others were made at Notting-hill-gate Station. The velocity of the moving air was measured by an air-meter in the centre of either the up or the down platform. Observations were also taken in the passages leading upwards to the street. The atmospheric pressure, the temperature as measured by the wet and dry thermometer, were also observed. The carbon dioxide of the air was estimated in the station, on the staircase, in the lift, and in the street outside the station. Mr. Wynter Blyth said:]

With regard to the general movement of air we established the following facts. In front of each train there was a distinct and measurable increase of barometric pressure, in the rear a diminution of pressure. As each train left a station it pushed a column of air in front of it, part of which, on reaching the station, rushed up the staircase into the open air, and as the train left the station air rushed down the staircase from the street. The upward and downward velocities varied with the position of the trains; the latter current was slower than the former and was generally under four miles an hour, while the former on one occasion, when two trains were entering the station almost simultaneously, reached a velocity of 7·4 miles per hour. The maximum velocity in the middle of the platform due to an approaching train was found to be 5·79 miles per hour. The temperature outside for the time of year was low—56° F.—the temperature of the air within was 67°. The difference of temperature is due to several causes—the temperature of the earth-crust retaining the summer heat; therefore, the walls of the tube being warmer than the external air, the animal temperature imparted by the thousands of persons, each at 98°, going backwards and forwards, and some portion may be due to dynamical heating of the air, for it is well known that whenever air is compressed heat is liberated. The amount of carbon dioxide at Bond-street Station was 10·3 parts per 10,000, while on the stairs leading from the station it was a point or two less according to whether the draught was up or down. This compares favourably with a sample of air taken in the tunnel between Gower-street and King's-cross Stations of the Metropolitan Railway, which has 25·9 parts of carbonic dioxide, and even with the council chamber of St. Marylebone Town Hall, where half an hour after a meeting of 56 persons had begun 14·9 parts of carbon dioxide were found present, the amount in the external air in each instance being a little over four parts. In the tube between stations the amount rose to 11·9. At Notting-hill-gate Station the tubes are not parallel, but one crosses the other, and it was discovered that while there were 10·7 parts in the upper station there were only 6·9 parts in the sub-station. The reason of this is that instead of depending upon the movement of the trains to effect ventilation the air is renewed here by means of a powerful fan. The air-supply circulates from the surface of the ground into a circular chamber deep down below the lifts, and up again, by means of downcast and upcast flues. The air rushes down at a velocity of 9·7 miles an hour, giving an hourly air-supply of no less than 855,000 cubic feet. The research clearly shows that where the ventilation depends entirely on the passage of the trains, although there is so much movement of air, so much sucking in from above and blowing out from below, a good portion of the air must be driven backwards and forwards unchanged in the tubes; in other words, the tunnel air is diluted, but the whole of it is never swept out, whereas with the assistance of a fan the ventilation was extremely good.

THE VENTILATION OF DWELLING-HOUSES AND WORK-PLACES.

For about nine months in the year houses may be well ventilated by open windows and doors, but in the colder weather it is important to keep the hall, the corridors, and passages, by special warming appliances, at a comfortable temperature; for when windows are fast shut it is through the passages, staircases, and corridors that we obtain most of the breathing air. Hence the necessity, if we wish to avoid unpleasant cold draughts, to keep these conduits warm; then, on the return of warmer weather, the condensation on the walls of moisture is avoided and the house continues dry. In such houses it is better to deal with the rooms individually and give them their own ventilating system. The best method of ventilating an ordinary room is a good warm air-grate with an electric fan, which can be put in action when required so as to draw the air more rapidly from the back of the grate. Such a fan may be easily made with a cover and tube, so that it can be adjusted over the opening and connected by a plug to the ordinary electric-supply. When not required it is easily removeable; when there are an unusual number of people in the room, or from any cause the room is likely to be badly ventilated, the fan can be put in action.

With regard to the ordinary tenement house it is doubtless at the present time hopeless to suggest any mechanical

appliance. The great and essential thing is to consider the passages and staircase; it is when the house is shut up for the night that the great harm from bad air is caused. On every floor—probably in most of the grates on every floor—burns a fire, each chimney shaft is drawing up air from the closed house; the consequence is that the upper rooms particularly are fed from the basement and from various occupied rooms. An ordinary crowded tenement house when you enter in the morning reeks from top to bottom with the peculiar organic odour of the breath of persons. Much of this is obviated if the passages and staircases are well ventilated, and here is opportunity for the use of good upcast ventilators in the shape of cowls; skylights and windows will certainly be closed by the tenants, but a good cowl in the roof, difficult to get at, is the best palliative.

The cubic spaces sanctioned by statute in common lodging-houses, in the cubicles of shelters, in tenement houses, in schools, in factories and workshops, are impossible to ventilate by ordinary means so as to attain even a reasonable standard of purity, and with the growing price of land it is unlikely that the allowance of cubic space per head will be increased. We are therefore bound to consider seriously the question of mechanical ventilation. If some of the great expert talent now employed in the investigation and discussion of problems relating to sewage and sewage disposal was diverted to the studying of systems by which spaces of from 250 to 400 cubic feet could be kept supplied with fresh, pure, pleasant air, our factories and workshops would put out more work in a given time, and the mean duration of human life in this country would be appreciably lengthened. As the deepest mine can be made not only habitable but agreeable and healthy, it should not be impossible to make a subterranean set of offices, lit by the electric light, artificially ventilated, and warmed by the retained heat of the earth, far healthier to work in than many a city office is under present conditions.

MILK OR WHEY IN ENTERIC FEVER?

BY PRIDEAUX SELBY, M.R.C.S. ENG., L.R.C.P. LOND.

THE object of this paper is to condemn milk entirely as a food for enteric fever cases and to point out an efficient substitute in the form of whey.

In the treatment of this disease, more perhaps than in any other, we have a vast field to work upon in the reduction of the death-rate, a field in which I trust to prove that we can work with a good amount of success. The fact that the cold bath treatment of enteric fever has reduced the death-rate in places where it has been systematically carried out to one-half what it was before proves that enteric fever is a disease which has had in the past a death-rate which was unnecessarily high. This death-rate has continued high in spite of the almost measureless improvements in hospital accommodation, in spite of improvements in sanitation, in spite of the system of modern nursing by which our methods of treatment are carried out to the letter, and in spite of the enormous increase in our knowledge of the pathology of the disease.

Bacteriology, again, has taught us more than pathology, but it has taught us the science of the disease and we are inclined to be led away from the old-fashioned methods of treating disease by diet and medicine into methods which can be summarised as antitoxin methods: methods which, though magnificent in diphtheria, in the case of enteric fever are in their infancy, and in their results up to the present time anything but satisfactory.

Forty years ago Murchison gave the average mortality of enteric fever in the London Fever Hospital for a period of 23 years as 16·79 per cent., but in 1855 it was only 14·2 per cent., whilst in 1860 it was 28·7 per cent. Last year the death-rate in the London fever hospitals of the Metropolitan Asylums Board was 15 per cent.; in the British army in the United Kingdom from 1889 to 1898 it was 19·16; and in Charing-cross Hospital from 1890 to 1898 it was 18·5. The death-rate for the quarter ending March 30th, 1901, from enteric fever in the hundred chief towns of England and Wales was approximately 20 per cent. The death-rate of London for the same period was 18·3 per cent., there being 729 notifications and 134 deaths. That this is so is wrong, radically wrong.

Authorities can be quoted by the dozen who with the intense conservatism which is born in us have continued and still advise a treatment which has been tested for over 50 years and has been proved to be inefficient—that is, the routine feeding of enteric fever cases on milk.

Enteric fever, which, we all know, is synonymous with typhoid fever, though it is difficult to persuade the public of that fact, is a disease which we may divide into two parts—firstly, the bacillus typhosus, and secondly the fever. Concerning the first, the bacillus typhosus is a microbe which is taken into the intestine with food or drink. It breeds in the contents of the intestines and attacks certain definite parts of the intestine, producing a condition which leads to the formation of ulcers. Apparently the bacillus only has the power of attacking the glands called Peyer's patches and has not the power of causing ulceration where there are no such glands. It is from these ulcers which are formed by the sloughing of the Peyer's patches that the chief dangers of the disease arise. The second division of the disease is the fever which is due to the absorption into the circulation of toxins and toxalbumins, which are poisons produced in the intestine by the decomposition of the nitrogenous foods in the form of proteids and albumins—chiefly milk curd. For clinical purposes we may ignore the fact of the bacteria being found in the mesenteric glands, spleen, and kidneys, for they seldom give rise to any local symptoms beyond some enlargement of those organs and do not require any special treatment. The cold-bath treatment has lessened the death-rate by preventing the high temperatures and their concomitant evils, but it must be a more sound form of treatment to go to the root of the evil and to lessen the production of these pyogenic poisons.

Milk should not be given as a diet to enteric fever patients, firstly, because milk in many cases forms hard cheesy curds in the stomach. These curds pass along the intestine, giving pain and scraping the raw surfaces of the ulcers and causing in many cases hæmorrhage, perforation, and death. The effect of these cheese-like masses of casein is worse for the patient than feeding on well-masticated solids. Moreover, the perpetual distension of the bowel from the large amount of gases evolved by the digestion or decomposition of the milk keeps the ulcers stretched and thus thins their floors. Secondly, because the bacillus typhosus breeds rapidly in milk, the more bacteria there are the more the toxins produced, and the more the toxins the more the fever and constitutional disturbance, with foul mouth, headache, cardiac weakness, delirium, and a feeling of illness.

In passing I would say that it would be a point of great interest for bacteriologists to determine whether the bacillus typhosus can live and increase in a medium containing no nitrogen, either in the free state as in air or in combination as in nitrogenous foods. I can find no record of any such researches. Though it breeds in water there is generally free nitrogen present in the form of air.

Now for the remedy. If we do not give milk what can we give in its place?

In a paper on typhoid fever which I read before the East Kent Branch of the British Medical Association at Canterbury I bemoaned the physiological necessity for milk as a diet and appealed to the members present to suggest a substitute, for I was convinced that it was wrong to give it. One gentleman, whose name it is my misfortune to have forgotten, mentioned that he had heard of whey being given in Dublin, but could give no particulars of cases. I determined to try it. Beginning very gently and watching the patients' hearts very carefully I found that the heart's action improved on what to my mind appeared practical starvation. The result has been to reduce the death-rate of the cases under my care which had been 15·5 per cent. for the previous seven years to 2·7 per cent. for 73 cases. With the exception of two cases, all those cases which I bring forward have been treated by me at the Beacon Hill Isolation Hospital of the Faversham Rural District, and I take this opportunity of acknowledging my indebtedness to the matron and nurses who have had charge of the cases, when they were not themselves patients, for their carefulness and the interest which they have taken in the method of treatment.

The following table shows the comparative analysis of whey and cow's milk :—

The Results of a Comparative Analysis of the Whey and Cow's Milk used, expressed in Percentages.

—	Whey.	Milk.
Total solids	7·4	12·43
Lactose	4·9	4·9
Fat	1·2	3·4
Albuminoids	0·8	3·3
Mineral matters	0·49	0·73

From this it will be seen that whey contains about half as much solids as milk does. The loss in fat is 2·2 per cent. and in albumin 2·5 per cent. Whey, therefore, practically consists of a solution of milk sugar with a small amount of fat, albumin, and salts. Science tells us that a male adult at rest requires daily three ounces of nitrogenous food, one and a half ounces of fat, 12 ounces of carbohydrates, an ounce of salts, and from 50 to 80 ounces of water. Taking four pints of whey as the average daily diet for adults the total in solids is roughly: three-fifths of an ounce of nitrogenous food representing a deficiency of 2⅘ ounces; 1⅕ ounces of fat representing a deficiency of three-tenths of an ounce; four ounces of carbohydrate representing a deficiency of eight ounces; and two-fifths of an ounce of salts representing a deficiency of three-fifths of an ounce. It is therefore a surprise to find from practical experience that the body can carry on its functions well for three months (Case 44) during an illness with high fever on a diet in which the nitrogenous food has been reduced to little more than half an ounce daily. Sugar of milk, $C_{12}H_{24}O_{12}$, contains no nitrogen; whisky, which is alcohol, C_2H_6O, with a little colouring matter, traces of essential oils, and water, also contains no nitrogen.

Preparation of the whey.—To each quart of new milk stir in two teaspoonfuls of rennet. Put it into a pan and warm slowly till it curdles. This takes about 20 minutes. Break up the curd and strain the whole through fine muslin. The curd is thus separated from the whey. A quart of milk yields about six ounces of curd. The rennet we use at Beacon Hill Hospital is freshly prepared by a local druggist and is thus free from salt. The whey prepared from fresh rennet is thus more palatable, but all of the ordinary rennets sold by druggists and grocers answer very well. As rennets are slightly variable in strength the correct amount to be used in each case to form a curd of sufficient firmness must be learnt by experience. More cream can be added to the whey if required. The whey can be sterilised in summer and made more palatable to some people by the addition of tea, coffee, or other flavouring material. For children, if it be coloured pink with a little cochineal, it makes them very happy. The quantity given varies from a pint and a half to six pints daily. In no case have I limited the quantity. If the whey be sterilised some lemon-juice should be given occasionally to prevent scorbutic symptoms. In only two or three cases did vomiting take place and in each instance it was shortly after admission and was probably due to undigested solids in the stomach. Two of these children passed fresh black currants and seeds. Most patients take whey well without any flavouring and they generally infinitely prefer it to milk. All the patients discharged have been sent out well, and I have not heard of any ill after-effects in any case. It is a difficult thing to reconcile these practical results with physiological data, and the physiological deficiency is the lack of nitrogen. True, many patients have had some beef-tea, but it was given as a variation in diet to make them feel happier or because there was constipation. It will be noticed in the table, however, that most patients had no beef-tea at all.

Some theorists maintain that the patient obtains his nitrogen from his own tissues. It matters not where he obtains it or whether he obtains it at all provided the practical result is good. Perhaps the system in enteric fever has the power of absorbing it from the atmosphere; perhaps it can do without it.

The amount of emaciation on this diet varies very much, but not more than it does on any of the usual diets for enteric fever. Some patients seem scarcely to lose weight, but the patient in Case 48 was so thin that the abdomen appeared absolutely empty and the outline of the spinal column showed through the skin of the abdominal wall. She was troubled with the characteristic green motions sometimes found in enteric fever, but when the fever had gone she regained weight even faster than she had lost it.

The most marked beneficial effects of the whey diet are in the clean mouth and tongue. Even in the third week of the disease the tongue and mouth scarcely vary from the normal healthy condition. One never sees sordes, thick dry fur, cracked tongue, ulceration, *et hoc genus omne*, so that the patients' sufferings are at once halved and they have really little to complain of.

That the result of whey diet on the heart is good can be seen at once by the gradual diminution of the pulse-rate in nearly every case. In Case 44 the pulse was 60 after 11 weeks' use of whey diet, and in Case 33 it was 46 on the twenty-sixth day after admission.

The fatal cases of enteric fever were two and in one of these the disease was doubtful. Another case (21), a woman who was admitted suffering from uræmia and who rapidly became comatose and died three days after admission from that condition, I have expunged altogether from my list as there was no evidence of enteric fever.

The first fatal case (Case 31) was a true death from enteric fever of a very severe type. On admission the patient had a weak dicrotic pulse. His temperature chart was an extraordinary one, there being scarcely any variation morning, noon, or night; he had profuse diarrhœa and perpetual hæmorrhages, and finally he collapsed with a profuse hæmorrhage following on very severe diarrhœa. I cannot but regret now that I did not use the cold-bath treatment in this case. The patient certainly would not have had so much exhaustion from the high temperature and it might have enabled him to withstand the effects of the deep ulceration that was evidently present. He was admitted at about the tenth day of the disease and kept a good pulse in spite of small hæmorrhage till the twenty-eighth day. On the thirty-first day his bowels acted seven times with hæmorrhage, on the thirty-second day 15 times, and on the thirty-third day 14 times. I believe the blood in the intestine was the cause of the purging and the purging aggravated the hæmorrhage, thus causing a "vicious circle." The actual cause of death may be classed as "hæmorrhage." I cannot believe that any different diet would have saved the patient. The patient in the other fatal case (Case 35) was a young man who had been in Cuba and had had "Cuban fever." He was yellow and cachectic on admission and was suffering from diarrhœa with very green stools containing much mucus. The pulse on admission was 116 His temperature kept hectic, as may be seen from the chart, and his symptoms were more those of dysentery and abscess of the liver. It was most difficult to get him to take his nourishment. After four weeks the temperature became normal and the loose motions ceased. He was well enough to sit up and I put him on semi-solid diet, but violent diarrhœa started immediately again and he died more than eight weeks after admission. It is very doubtful whether this was a case of enteric fever at all, but as there is doubt I thought it better to include it.

For many years there have been medical men in different parts of the world who have tried methods of dieting different from the routine milk diet. As far back as the "seventies" Mr. William Thomson of Melbourne in Australia, a man of much originality, an interesting writer, and a man with much experience of enteric fever, eliminated milk from the diet of his patients and fed them entirely on raw meat-juice and whisky. He was reputed to have lost only two cases in all his practice. Dr. O. F. Paget of West Australia records[1] that he has treated well over 100 cases of typhoid fever without a death. He gives his patients large doses of olive oil by the mouth and the rectum, but he does not mention how he diets them. Recently Dr. F. J. Smith of the London Hospital advocated stopping all food for 24 hours if undigested milk or other food were found in the motions, varying the quantity of food according to the patient's appetite, and even giving nothing but cold water for four or five days at a time with the happiest results; but "milk is his sheet anchor," and he did not in his article mention his death-rate.

Since making up my table I have had one more case. The patient refused whey at first and spat out his nourishment, so I allowed him to go without nourishment altogether for

[1] THE LANCET, Nov. 27th, 1897, p. 1383.

TABLE GIVING DETAILS OF 75 CASES OF ENTERIC FEVER IN WHICH THE PATIENTS WERE FED ON WHEY.

No. of case.	Age.	Sex.	Highest temperature in degrees F.	Duration of temperature after admission in days.	Highest pulse-rate.	Highest daily action of bowels.	Alcohol in ounces.	Whey. Quantity in pints.	Whey. Duration in days.	Remarks.	Complications.
1	5	F.	104·2	11	144	10	1½	2½	24	There was much tympanites. Turpentine enema, 10 minims in four ounces of water; oil enema for constipation. Otitis interna. The patient was sick at first till whey coloured with cochineal was given.	Spots; otitis.
2	4	F.	104·4	5	136	6	1	2	30	—	Slight hæmorrhage before admission.
3	52	M.	—	—	—	—	2	3*	22	—	Heart disease.
4	47	M.	—	—	—	—	2	3*	—	—	Pneumonia.
5	53	M.	—	—	—	—	2	3*	—	—	—
6	15	F.	—	—	—	—	8 and 12	4	44	The patient passed urine unconsciously. A bad case; two relapses; got out of bed; picked a hole in her head. Also had meat essence (Brand).	Toothache.
7	20	F.	—	—	—	—	6	3	27	From Maidstone epidemic. Also had 10 ounces of beef-jelly daily.	—
8	2	M.	—	—	—	—	1	3	13	Two minims of tincture of opium four times a day for five days.	Peritonitis.
9	7	F.	—	—	—	—	0	2½	20	Also had beef-tea and the whit of two eggs. Periostitis of the tibia afterwards.	Diarrhœa; otitis; endocarditis.
10	13	F.	—	—	—	—	3	3½ and 4	40	Very slight hæmorrhage; cough; leucorrhœa; relapse.	Heart; otitis.
11	16	M.	—	—	—	—	4	4	5	—	Pericarditis.
12	17	F.	—	—	—	—	—	4	39	Had beef-tea also after 21 days. Note 10 days after admission: "Has had nothing but whey. Pulse 72, good. Cardiac first sound excellent."	—
13	26	M.	—	—	—	—	—	3*	21	—	—
14	25	F.	—	—	—	—	2 and 4	4	14†	—	Albuminuria; hæmorrhage; phlegmasia alba dolens.
15	25	F.	—	—	—	—	½	3	14	Did not abort.	Pregnancy, three months.
16	5	M.	—	—	—	—	—	3	18	—	—
17	6	M.	—	—	—	—	—	3	5 and 23	Relapse on the fifteenth day.	—
18	36	F.	103·2	17	114	C.	—	4½	21	Slight attack. (C. here and elsewhere signifies constipation.)	—
19	5	M.	104·2	28 and 18	140 and 112	4	3 and 2	3	37 and 29	Also half a pint of beef-tea flavoured with vegetables. A long severe case with relapse.	Acute meningitis.
20	11	M.	101·4	14	116	4	—	3½	20	—	—
22	46	F.	102·4	21	104	6	6	3	30	The patient had eaten oysters 14 days before admission. Abdomen very doughy. Opium for diarrhœa.	Aphasia (temporary).
23	61	M.	103·0	26	88	3	3	4½	43	Olive oil enemata for constipation. Later slight rise of temperature from tympanites.	—
24	27	F.	103·0	17	110	6	2	3½	24	The whey was slightly flavoured with tea. Fifteen minims of tincture of opium for diarrhœa.	Pregnancy; aborted thirtieth day.
25	9	M.	104·2	21	112	2	—	3½	30	Sponged occasionally.	—
26	4	F.	102·8	9	120	2	—	3	20	—	—
27	28	F.	99·2	20	62	C.	—	3½	30	The temperature did not go to 100° F. throughout.	—
28	12	F.	103·0	21	112	2	—	3½	34	—	—
29	13	M.	104·2	5¶	106	C.	3	3½	14	—	Epileptic.
30	7	M.	104·2	16	126	4	2	3½	51	An interesting drop in the temperature from 102° to 97° F. occurred without apparent cause. Afterwards a constipation temperature.	—
31	31	M.	104·4	25	122	15	4	4	25	The temperature varied from 103° to 104° F. for the first week. Was admitted with dicrotic pulse. Three hæmorrhages. Most severe and profuse diarrhœa. The patient died rather suddenly.	—
32	12	M.	103·4	4¶	100	C.	—	3½	17	Apparently an abortive attack as in Case 29 (a brother of this patient).	—
33	34	M.	104·2	24	94	3 and C.	2**	4	25	The pulse 52, good, after 25 days on whey only. Enormous appetite when convalescent.	—
34	24	F.	103·4	17	118	2	—	4½	25	The pulse came down steadily on whey.	—
35	22	M.	103·0	30	136	6	2	4	42	A cachectic anæmic man who had fever in Cuba. Much slimy diarrhœa. ? Dysenteric. Very difficult to feed. After the whey was left off the diarrhœa was lienteric. The patient was very depressed. Vide chart.	Cuban fever; cachexia.
36	9	F.	104·0	24	144	4	3	3	35	A good whey case. Perpetual diarrhœa for over three weeks, with fever, but the pulse steadily improved.	—
37	13	F.	103·4	21	128	2	3	3	32	Spots.	—
38	7	F.	102·6	13	132	3	3	3	28	—	—
39	14	F.	102·8	14	126	4	—	3	25	A sister of the last two patients. She took no alcohol, so her case compares well with Case 38.	—
40	8	M.	104·6	29	144	5	2 and 4	3 and 4‡‡	42	A severe and long attack. There was much abdominal distension which was relieved by turpentine enemata.	Cerebral irritation with cough.

TABLE GIVING DETAILS OF 75 CASES OF ENTERIC FEVER IN WHICH THE PATIENTS WERE FED ON WHEY—(*Continued*).

No. of case.	Age.	Sex.	Highest temperature in degrees F.	Duration of temperature after admission in days.	Highest pulse-rate.	Highest daily action of bowels.	Alcohol in ounces.	Whey. Quantity in pints.	Whey. Duration in days.	Remarks.	Complications.
41	38	M.	103·6	29	112	7	3 and 8	4	29	A recrudescence of temperature on the twelfth day after normal lasted 13 days due to abscess over the sacrum. A long and severe case.	Hæmorrhage.
42	2	F.	101·0	7	106	2	0	3	21	A daughter of the patient in Case 41.	—
43	22	M.	104·4	31	130	13	4	4‖	42	—	Toothache; delirium.
44	21	F.	105·0	38 and 8 and 14	120	6	3	4	39	On the thirty-ninth day of the disease the pulse was 96, full and good, on whey and whisky only. The patient lived on whey and whisky for 39 days. No diarrhœa.	Gland in neck afterwards; phlebitis.
45	32	F.	103·2	11	136	1	4	4	28	—	Constipation.
46	24	M.	100·8	9	98	7	0	4	19	—	—
47	6	M.	103·6	46 and 8	140	6	4	3 and 4	61	Long-continued fever with high pulse, followed by constipation temperature.	Diarrhœa for three weeks.
48	32	F.	105·0	45	128	8	4 and 1	4	56	The mother of the last patient. Hæmorrhage of clots for 10 days. Grass-green motions relieved by salol. Very thin. Interesting case.	Hæmorrhage; hysteria; green motions; diarrhœa.
49	28	M.	104·0	21	104	6	4 and 6	5	28	A brother of the patient in Case 46. Suppression of urine for 24 hours; dicrotic pulse; hæmorrhage. Arteritis in the leg afterwards, with slight slough on the toe.	—
50	5	M.	—	—	—	—	—	4	21	No rise of temperature after admission.	—
51	23	M.	105·0	35	120	17	3	4‖ and 5	48	The patient had eaten mussels from the sewer opening at Whitstable. There was much diarrhœa; coma vigil; muscular tremors. Steady improvement of the pulse.	—
52	13	M.	103·8	18	108	4	0	4½	49	Bowels not being opened for eight days caused a rise of temperature for eight days.	
53	20	M.	103·8	18	94	3	0	4‖	43	Peeling with scarlet fever and ill with typhoid fever when admitted.	—
54	33	M.	103·8	20	100	1	0	3	31	Retention of urine on admission. Temperature normal in four days; three weeks later the temperature was for 21 days typical of typhoid fever.	—
55	9	M.	104·0	7	126	8	0	3	20	One of six patients in the same family.	—
56	20	M.	103·8	7	84	1	0	4	22	Spots.	
57	28	F.	104·0	21	120	4	0	4½	35	Had a miscarriage. She did washing for a typhoid fever case at Kennaways Hospital.	
58	11	F.	103·0	11	116	7	1	2 or less ¶¶	25	Spots. Troubled with vomiting on admission. Retained nothing but brandy-and-water for three days.	
59	13	F.	104·6	23	124	6	6	3½	30	Passed motions unconsciously. Typhoid voice, high-pitched and querulous.	
60	6	F.	105·2	24	126	7	2	2½	30	Green motions. Sponged. Took little whey. Salol, three grains three times a day.	
61	29	M.	100·0	1	72	1	—	4	15	Ill three weeks before admission. Spots; hæmorrhage.	
62	43	M.	103·8	37	100	4	1	4 and 6	22	The sixth case from one house. Spots; much blood in the urine.	Acute nephritis.
63	32	M.	104·0	20	118	1	3	5‖	38	Acute purulent bronchitis. ? Typhoid. Was re-admitted after previously being discharged.	
64	32	M.	103·0	5	92	1	0	4	17	Ill about a fortnight. Spots. Re-admitted above.	
65	7	F.	99·6	7	66	2	0	3	8	Probably not typhoid fever.	—
66	7	F.	104·8	21	132	3	0	3½	41	Same as last case. ? Caught typhoid fever in the hospital.	
67	4	M.	105·6	10	134	11	1	2½	36	Green motions. Three grains of salol. Passed a whole black currant in motions, also seeds.	Scurvy.
68	—	—	103·0	—	—	—	—	—	—	A private case. The patient was nursed by his wife.	—
69	—	—	—	—	—	—	—	—	—	A private case.	—
70	27	M.	103·2	23	112	5	3	4	34	Only passed two ounces of urine in the first 18 hours. No albumin. Had eaten oysters.	—
71	17	M.	103·0	6	84	2	3	4	22	An abortive case of undoubted typhoid fever.	—
72	—	—	—	—	—	—	—	—	—	An ordinary case.	—
73	—	—	—	—	—	—	—	—	—	A severe ordinary case with steady pulse.	—
74	—	—	—	—	—	—	—	—	—	A peculiarly slow, steady pulse.	Relapse.
75	—	—	—	—	—	—	—	—	—	A doubtful case. ? Only pneumonia or abortive typhoid fever. Constant diarrhœa.	—
76	20	M.	104·0	—	90	5	4	4	32	An enormous hæmorrhage, almost three pints on the twenty-sixth day, also on the twenty-seventh and twenty-eighth days; dicrotic pulse 84 afterwards.	

Counting Cases 63, 64, 65, and 66 as two cases and omitting 21 = 73 cases.

* And one pint of milk. † Then milk and whey. ‡ And beef-tea. § Beef-tea after 20 days. ‖ Beef-tea after 14 days. ¶ Epidemic. ** After 15 days. †† Beef-tea after the twenty-fifth day. ‡‡ Chicken broth after the twentieth day. §§ Beef-tea on the thirtieth day ‖‖ Cream and beef-tea. ¶¶ Soda-water. *** Jelly. ††† Beef-tea and jelly.

24 hours. He then took the whey and liked it exceedingly well and has made a good recovery.

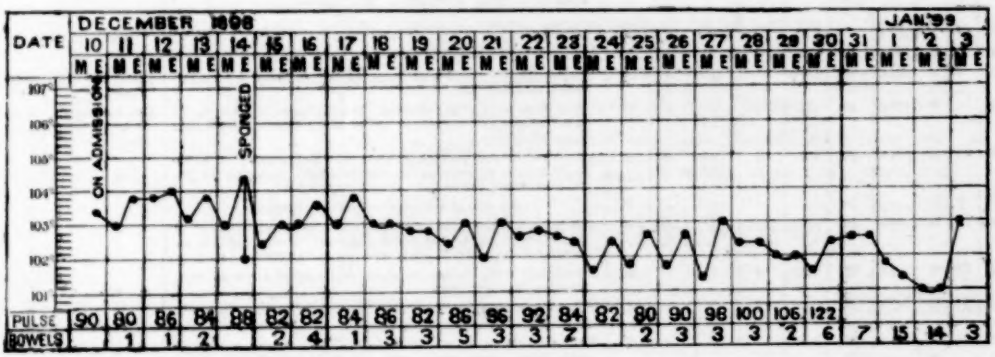
In Cork-street Fever Hospital, Dublin, the death-rate for about 15 years is about 7·5 per cent. Dr. J. M. Day, the resident medical officer, writes to me that his treatment is sweet whey, white of egg, and broth chiefly. He does not use milk if there be tympanites, diarrhœa, hæmorrhage, or any evidence of its disagreeing with his patients, and never gives children milk except in very mild cases. It is probable, therefore, that it was to Cork-street Fever Hospital that my Canterbury friend referred.

Besides those who have written on the subject one hears of a growing tendency amongst medical men to feed enteric fever patients on white of egg, barley-water, and veal broth. The death-rate of the Maidstone epidemic was only about 8¼ per cent. This much we know, but we would also much like to know how those cases were treated—whether they were all treated on milk or whether they were treated without milk. It would be a great kindness if the medical men of Maidstone would enlighten us. In epidemics one expects a lower death-rate than in sporadic cases, because the early recognition of the disease halves the danger and certainly modifies the severity of the attack.

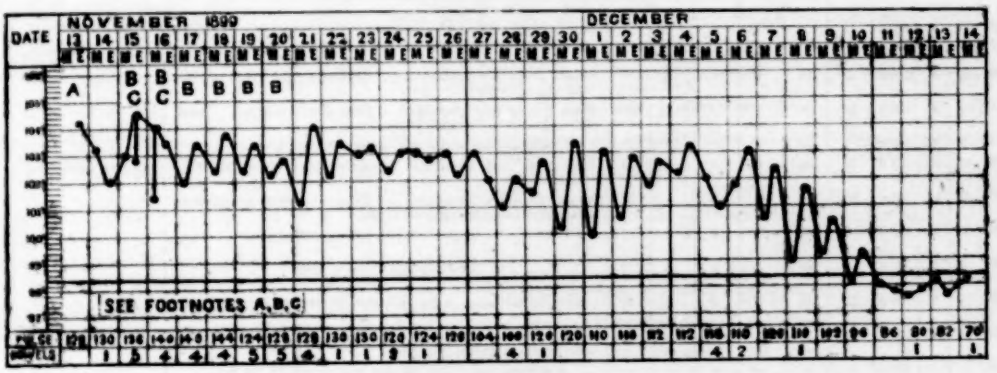
In treating cases of enteric fever I always find it a great assistance, if the patient be old enough to understand, to explain to him that the disease is an ulceration of the bowel and that he must be kept on the diet to prevent the risk of food scratching a hole in the bowel. He is flattered at being taken into one's confidence and fully and easily appreciates the necessity for it from a common-sense point of view. After doing this it is seldom that one hears the usual complaints that are inseparable from a condition where a patient is hungry and is not given enough to satisfy his appetite. Moreover, he takes an intelligent interest in his own case. As I once knew a case of relapse on the fifteenth day, I keep the patient on the diet until 15 days after the temperature has regained its normal rate. This may be thought four or five days longer than is really necessary, but it absolutely does away with any risk of relapse from too early feeding. One frequently gets a slight rise of temperature during this fortnight if there be much constipation, but an enema of half a pint of olive oil generally removes it. In cases with such rises of temperature it is always well to examine the teeth, for I have on many occasions—and this is particularly the case after scarlet fever—found that an aching tooth which the patient had not mentioned has caused the rise of temperature.

It is wonderful how little trouble patients treated in this way are to the practitioner and the nurse. Even when they are admitted in a state of delirium it very rapidly disappears and the mind becomes clear and the patient quiet and easy to manage. Instead of keeping the medical man in a state of perpetual anxiety and worry, necessitating, perhaps, three visits in the day, they do so well that they can be seen at his convenience and when they are seen require seldom more than the usual examination of tongue, pulse, heart, palpation of the abdomen, inquiry as to quantity of urine and freedom from albumin, and the directions to the nurse to "go on the same." One case, that of a young man in a cottage with a sensible little woman for a wife, was treated at home and did as well as those in hospital. In such cases I would urge the absolute necessity of explaining the disease and the treatment, and the nurse will not then feed her patients on apples and grapes.

CLINICAL CHART OF CASE 31.

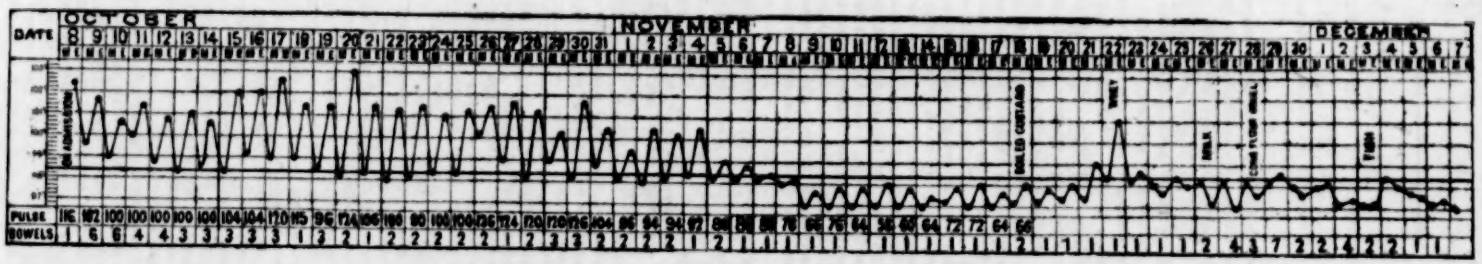


CLINICAL CHART OF CASE 40.

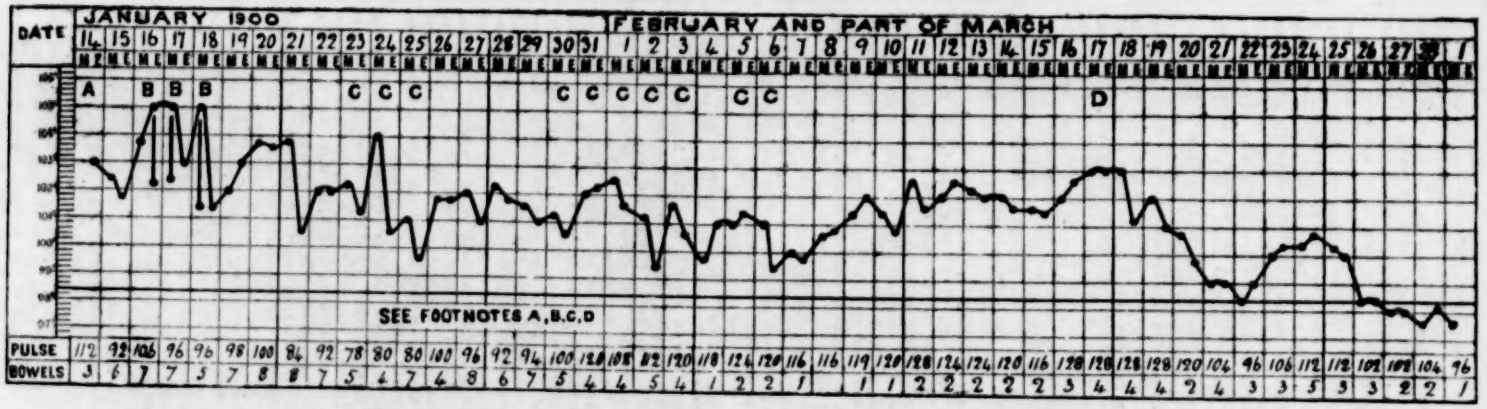


A. On admission. B. Turpentine enemata (half ounce twice or thrice daily).
C. Sponged (the vertical lines indicate the reduction of temperature 20 minutes afterwards).

CLINICAL CHART OF CASE 35.



CLINICAL CHART OF CASE 48.



A. On admission. B. Sponged (the vertical lines indicate the reduction of temperature 20 minutes afterwards). C. Intestinal hæmorrhage. D. Oidium albicans.

Alcohol is a most important factor in feeding in enteric fever cases. Sixteen of my patients had no alcohol, but the majority of them had from one to four ounces daily. In Case 6 the patient, a female, aged 15 years, had as much as 12 ounces and in Case 59 the patient, aged 13 years, was given six ounces. Both of these patients had the querulous, high-pitched voice so characteristic of enteric fever and were weak in intellect for a short time after convalescence. In both of these cases the alcohol was pushed because the cardiac first sound was weak—and in such cases the alcohol *must* be pushed to any extent. I have given 24 ounces daily before beginning this treatment. From two to four ounces for adults seem beneficial and never do any harm, acting as a food and lessening tissue change, and I would always advise that a small quantity be given. I use whisky or brandy, as the patient prefers.

A symptom one meets with perhaps once in 20 cases is grass-green motions. I have found from five to 10 grains of salol three times a day rapidly cure this, and since beginning the use of salol I have never had to use any other drug for it.

Fever.—In no case have I had to resort to the cold bath, though I now think that the patient in Case 31 would have been the better for it. In the first place, I never allow the patient more than one sheet over him as bed-clothes, even if he complains of feeling cold. If his temperature goes higher than 103° or 104° F. I have him sponged and placed under a cradle with one or two icebags suspended inside and a sheet over the top. This forms a cold-air bath and is quite efficient.

Hæmorrhage occurred in five or six cases, including Case 31, a fatal one. The other cases gave no trouble, though the patient in the last case in my list had an enormous hæmorrhage measuring over two pints. In this case a pulse of 84 was kept after the hæmorrhage and the patient made a good recovery. We may assume that no treatment will prevent the possibility of an occasional hæmorrhage so long as ulceration occurs, for it is the natural sequence of ulceration, but one hopes that in the future a means of preventing the ulceration will be discovered. It is quite possible that large doses of salad oil would saturate the sloughing Peyer's patches, and by stopping the supply of nitrogen to the bacilli so prevent further ulceration.

One may generalise and say that drugs are required only for complications. In the space at my disposal it is quite impossible for me to give an account of all the cases, for each one in itself is a clinical lecture, but some of the more interesting charts are reproduced and I have tabulated all the cases, giving the age, the sex, the highest temperature, the duration of temperature after admission, the highest pulse, the highest daily action of the bowels, the amount of alcohol given, the quantity of whey administered daily, and the length of time that the patient was kept on whey, as well as remarks on anything that made the case especially interesting, and as to complications. The general severity of each case will be gathered from these data, and I think that we may regard them as a very fairly average lot of cases, such as might come under treatment in any hospital, and thus fairly to be taken to compare the results obtained with those obtained elsewhere. Unfortunately in 21 cases the temperature charts were destroyed, so that the table is incomplete, but there are still sufficient to be of interest.

Every case of enteric fever is of intense interest, for the variety is so enormous. In the paper which I read at Canterbury, already alluded to, I enumerated 22 complications which I had met with, and I am sure that those who discussed the paper afterwards added quite as many more.

In spite of my strong advocacy for this line of treatment I do not desire to be dogmatic, for every case must be treated on its merits according to the judgment of the practitioner who is attending it, but I do, and shall always, insist that milk diet is the wrong diet and I have done my small best to prove that it is so. Theoretically I believe that enteric fever patients would do as well on an artificial whey and salad oil as on anything else, but I trust that this will be investigated in the future. So long as my patients continue to do as well as they do at present I shall be satisfied with my present treatment, but should occasion arise to make me dissatisfied I shall seek to improve the diet and shall then publish the result.

As a last word I would urge practitioners to give the treatment a fair trial and to let their results be known. I cannot but believe that the present high death-rate is unnecessary, and if this is the case it calls for radical alteration, and we should not rest satisfied till for the whole of England our death-rate from enteric fever is a cypher.

Teynham, Kent.

ADVANCES IN THE TREATMENT OF DISEASES OF THE NOSE.

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IN the treatment of diseases of the nose very great advances have been made within recent years. For example, the subject which, perhaps, more than any other occupies the attention of the modern rhinologist is not even mentioned in Morell Mackenzie's work on Diseases of the Nose—that of the diseases of the accessory sinuses and air-cells. True, acute suppuration in the antrum of Highmore is described by John Hunter, an affection usually of dental origin and associated with swelling, redness, and œdema of the cheek. But this affection is extremely rare, whereas suppuration with no external signs is comparatively common and yet has attracted attention only during the last 15 years. Ziem, who first described it, was himself a sufferer and for years sought the advice of his colleagues in vain for a fœtid discharge from the nose. At length he himself divined the cause and had his antrum opened and was cured. Being now on the look-out he soon discovered that the disease was not infrequent, and more recently it has been found that suppuration in the frontal and other sinuses is almost as common as suppuration in the antrum. Thus a surgeon became famous and opened up a new field for surgical enterprise through the fortunate accident of having his own body to study on. Truly "it is an ill wind that blows nobody good." [The anatomy of the nose and its accessory cavities was briefly described and illustrated with lantern slides and specimens.]

SUPPURATION IN THE NASAL SINUSES.

Antral suppuration is often due to caries of the teeth, but that this is not the only cause, as has often been said, is shown by the fact that the teeth cannot possibly cause suppuration in the frontal or other sinuses. The most common causes are severe nasal catarrhs, especially when associated with infectious fevers, influenza, &c. The recent epidemic of influenza, in addition to its other sins, is probably responsible for the large number of cases of this kind seen at present, as well as for the large and increasing prevalence of nasal polypi.

An acute catarrh of a sinus is commonly associated with a nasal catarrh and if then the outlet of the sinus becomes blocked acute suppuration will result. The openings of the sinuses are small and ill-situated for drainage and a moderate amount of catarrhal swelling alone is sufficient to occlude them. The majority of these acute suppurations get well spontaneously, but in some cases chronic suppuration results. This may be due to several causes. The intensity of the original inflammation may irretrievably damage the mucous membrane lining the sinus; there may be an obstruction to the outlet of the sinus from thickening of the mucous membrane or bone or from polypi preventing a free escape of the discharge; and ultimately the persistence of the suppuration may induce changes in the lining membrane or bony walls of the sinus. Again, a chronic disease in the nose may maintain a chronic catarrh in a sinus, or the cavity may contain a foreign body—thus a tooth may be found in the antrum. The usual history of an acute case is that the patient experiences a sudden increase of the nasal symptoms with a feeling of heat, fulness, and distension in the nose and over the region of the affected cavity. There are pain and tenderness and in many cases severe neuralgia shooting along the trigeminal nerve. In a few of the more severe cases there may be much constitutional disturbance, and the soft tissues overlying the cavity may become swollen, red, and œdematous. The feeling of tension is much increased on straining, coughing, or lowering the head. After a few hours or days of increasing suffering there is a sudden discharge from the nostril on the affected side, consisting of muco-pus or pus, mixed with more or less blood, and the symptoms are at once relieved. This may be the end of the attack, or after a brief interval

the symptoms may return and increase in severity until a second discharge takes place. This cycle of events may even be repeated, but in the end complete recovery usually ensues. It is important that these cases should be recognised and appropriately treated, because if the suppuration should continue secondary changes will occur in the lining membrane and walls of the sinus which will lead to chronic suppuration and make the cure a matter of great difficulty. On the other hand, in early cases cure is usually an easy matter.

The chief object of treatment is to reduce the swelling around the opening of the cavity and to allow free escape into the nose for the pent-up discharge. The nose should be washed out by means of an alkaline lotion such as Dobell's. The formula for this is three grains each of bicarbonate of soda and borax and one and a half grains of carbolic acid with a little glycerine or sugar to an ounce of water. It is the most useful of all nasal lotions and is capable of much variation. Thus the carbolic acid may be omitted when it seems irritating, salt or chloride of ammonium may be added when a stimulant is required, and hazeline may be introduced when an astringent is required, and so on. This lotion should be used until all catarrh has ceased. Of the special measures to reduce the swelling around the opening of the cavity the best is the application of a solution of suprarenal extract and cocaine. Suprarenal extract is a recent introduction of great value in all nasal work. It increases the anæsthetic action of cocaine and prevents its absorption. It is a strong astringent to the nasal mucous membrane, rendering it white and bloodless, so that operations may be performed on the nose without the loss of a drop of blood. To obtain the full effect the solution should be freshly prepared. Ten grains of extract of the dried gland should be dissolved in 100 minims of distilled water, filtered, and 10 grains of cocaine added. Pledgets of wool soaked in this solution should be packed into the nose high up under the middle turbinate, and retained there for from 20 to 30 minutes to obtain the full action. If the frontal sinus be affected discharge soon commences to trickle down into the nose; should the antrum be at fault, the evacuation of the cavity may be facilitated by lowering the patient's head and bending it over towards the opposite side. Subsequently any hypertrophy or swelling should be removed, the depletion caused by the local blood-letting tending to prevent recurrence of the swelling. In fact, should this treatment not be effectual, incisions simply to produce local blood-letting should be tried. Subsequently, to keep the passages clear the best application is a spray of menthol, from 5 to 10 per cent., dissolved in almond oil or paroleine, and hot fomentations should be applied, as they relieve the pain and are very grateful to the patient. If these measures fail active means must be adopted to secure the evacuation of the cavity. If the maxillary antrum be affected it should be punctured and the pus should be washed out by irrigation. The particular method to be adopted depends on various circumstances. If the adjacent teeth are carious they should be extracted and the antrum should be perforated from a socket with a small drill. This little operation is easily done under gas. The first molar is the site of election, as its roots are separated by a very thin plate of bone from the floor of the antrum; but should the first molar be healthy it is quite easy to reach the sinus through the socket of the second molar or either of the bicuspid teeth. Having made an opening the nozzle of an antrum syringe is inserted and the cavity is washed out with a solution of boracic acid, boiled salt solution, or other unirritating fluid. This irrigation must be repeated daily until the discharge ceases, but, as a rule, in these acute cases no pus will be seen after the first washing and after two or three days the treatment may be discontinued and the opening allowed to close. On the other hand, when no carious teeth are present and when there is no vacant space in the alveolar border the antrum should be punctured from the inferior meatus of the nose. A pledget of wool soaked in cocaine is packed in beneath the inferior turbinate and then a small trocar and cannula are passed into the nose and directed strongly outwards about half an inch behind the anterior extremity of the inferior turbinate so as to bring it into contact with the antro-meatal septum at its thinnest part. It is then pushed onward into the cavity, the trocar is withdrawn, and the cavity is washed out through the cannula. This operation has the advantage that it does not entail the sacrifice of a healthy tooth when no carious tooth or vacant space is present, that it only requires cocaine anæsthesia, and that it does not establish a communication between the nose and the mouth. On the other hand, this opening cannot be maintained and therefore the operation has to be repeated daily or as often as necessary until a cure is established.

I have gone somewhat fully into the diagnosis and treatment of these cases as they are commonly met with in general practice and their treatment is easily conducted and very satisfactory.

Chronic suppuration is a much more difficult matter to treat. In the first place the single symptom is a purulent discharge from the nose and the diagnosis is difficult and in many cases impossible. One important rule may be laid down, that in every case in which there is a purulent discharge from the nose there is most probably suppuration in one of the sinuses, and further that although suppuration in the antrum, or indeed in any sinus, may be met with alone, in the majority of cases two or more sinuses are simultaneously involved. When no external sign of disease is met with the first point in determining the origin of the pus is to ascertain the position at which it appears in the nose. Thus pus coming from the middle meatus implies suppuration in the anrum, frontal sinus, or anterior ethmoidal cells. Pus appearing in the posterior part of the nose and coming from above the middle turbinate means suppuration in the posterior ethmoidal cells or sphenoidal sinus. Another method of diagnosis, reliable only in disease of the antrum, is trans-illumination. The patient is examined in a dark room; a small but powerful electric light is placed in the mouth and if the antra are normally clear the cheek will be lighted up, a bright band will appear along the infra-orbital margin, the pupils will be lighted up, and the patient will experience a subjective sensation of light. When the antrum contains pus the bright band along the infra-orbital margin is absent, the pupil is dark, and the patient sees no light. These signs are obviously much more definite when one antrum only is affected. But the one really reliable means of diagnosis is exploration by means of puncture and irrigation. In the majority of cases it is possible to differentiate disease of the anterior set of sinuses, namely, the antrum, the anterior ethmoidal cells, and the frontal sinus, from disease of the posterior set, the sphenoidal sinus and the posterior ethmoidal cells. If there is no definite evidence as to which of the anterior set of sinuses is involved, the antrum should be first attacked, then the ethmoidal cells, and lastly the frontal sinus. If the posterior set of cavities be affected the posterior end of the middle turbinate should be removed, and then either the posterior ethmoidal cells opened, or, the ostium of the sphenoidal sinus having been brought into view, this cavity should be washed out through its natural opening. An important rule to bear in mind is that in every case it is necessary to explore the cavities one by one until all sources of suppuration have been discovered, for commonly more than one cavity is affected.

The treatment of chronic suppuration consists, in the first place, in adopting simple measures. Any abnormality or disease of the nose should be removed and the approach to the outlet of the affected cavity thoroughly cleared. The antrum should be washed out through a simple puncture as already described. The sphenoidal sinus can be irrigated through its natural opening and attempts may also be made to pass a cannula up through the infundibulum into the frontal sinus. Should these means fail after prolonged trial the question of further operation must be discussed. In some cases the patient is better left alone; in others a radical operation must be undertaken. The affected cavity must be freely opened, all pathological conditions set up by the suppuration and tending to maintain it, such as polypi, caries, or necrosis of the walls, must be removed and means must be taken to prevent re-accumulation of the pus either by providing permanent free drainage or entirely obliterating the cavity. In the antrum a free opening is made through the canine fossa, any pathological products are removed, and then, by cutting away the wall separating the antrum from the inferior meatus of the nose, free permanent drainage is established. The canine fossa opening is allowed to close. The frontal sinus is opened through the supra-orbital margin, its anterior and inferior walls are chipped away, the lining membrane is entirely removed and the infundibulum is enlarged to admit of the passage of a large drainage-tube, and thus the sinus is entirely obliterated. The ethmoidal cells are best attacked from the nose with a sharp ring knife. The middle turbinate is first removed and then the ethmoidal cells

are thoroughly broken down and scraped away. The sphenoidal sinus is treated by enlarging its natural opening with punch forceps, such as Grünwald's, and the greater part of the anterior wall of the sinus may be chipped away. These measures are attended with a very fair degree of success, especially when it is possible to obtain complete obliteration of the sinus. They are not invariably successful, but our knowledge and means of dealing with these cases is constantly increasing, and before long better results may be expected.

Another great recent advance has been made in the treatment of *nasal polypi*. The methods of dealing with severe cases of this affection have hitherto been most unsatisfactory. Recently polypi have been ascribed to suppuration in the accessory sinuses; they are, indeed, very commonly associated with it, but they may occur independently. The real cause of the frequent recurrence of polypi is disease in the underlying bone. This theory can perhaps hardly be described as new, for Morell Mackenzie relates two cases in which recurrence of nasal polypus was prevented by removing some of the underlying bone, and the view had been urged as long as 100 years previously. Dr. Woakes 15 years ago strongly advanced similar opinions. These observations, however, had been neglected, but during the last year my own investigations have again aroused the controversy and have been confirmed by others. They show that in all cases of constantly recurring polypi a peculiar form of a rarefying osteitis is present, and it is upon this that the obstinate nature of the affection depends.

The treatment therefore resolves itself into removing, not only the polypi, but also the underlying diseased bone. In simple cases the wire loop of the snare may be made to include a piece of bone as well as the polypus. In more severe cases, after the polypi have been removed, the parts may be cleansed and anæsthetised with cocaine and the bone may be cut away with punch forceps. In the worst cases more radical means should be adopted. The patient should be placed under a general anæsthetic, the polypi should be removed with polypus forceps, and then the whole ethmoidal region should be thoroughly curetted with a sharp ring knife. It is impossible to see what is being done, but if care be taken and the sharp edge of the knife be directed outwards rather than upwards there is little danger of wounding the cribriform plate, and should the inner wall of the orbit be injured no harm will result. The healthy ethmoid is firm and resistant and the knife gets little hold, but the carious softened bone is easily scraped away and the curetting should be continued until every soft piece of bone or degenerated mucous membrane has been removed. The hæmorrhage from this proceeding is free and necessitates considerable caution with the anæsthetic. It usually, however, soon ceases, but in some cases it is necessary to pack the nose. The subsequent treatment consists in irrigating the nose until healing occurs. By these means a complete cure may be obtained in the worst cases of nasal polypi in which frequent recurrence has occurred for many years under the ordinary treatment. It is not, however, an operation to be lightly undertaken. Both the operation and the anæsthetic require the greatest care and it should never be carried out in patients who are not in good health or who are more than 40 or 45 years of age.

Trigeminal neuralgia.—The more our knowledge of local diseases of the nose and mouth increases and the more carefully these parts are examined the more frequently this severe disease will be found to arise from a purely local cause. In fact, it is doubtful if all cases are not of purely local origin. A large number depend upon diseases of the teeth, such as Rigg's disease, or an unerupted tooth. Many others depend upon disease of the nose. Sinus suppuration is a frequent cause and many a case of severe intractable neuralgia has been cured by simply opening the antrum. Another frequent cause is enlargement of the middle turbinate. This is liable to swell, and then it produces considerable pressure between the mucous membrane of the turbinate and the septum which may start a severe attack of neuralgia. Before prescribing medicinal remedies, therefore, local causes, especially in the nose and teeth, should always be sought for.

Hay fever and paroxysmal rhinorrhœa.—The symptoms of hay fever are well known, and an affection analogous to, but not identical with, hay fever is even more commonly met with. In these latter cases the symptoms—sneezing, nasal obstruction and profuse running at the eyes and nose—come on regularly every morning, varying much in intensity, sometimes lasting an hour, sometimes five or six hours. The patient may have two bad attacks a day or may pass three or four days without an attack. Sometimes an exciting cause may be noted; in other cases none can be discovered. Inhaling dust, various smells such as those of roses and violets, the emanations from certain fabrics such as oriental carpets, draughts, the change from a warm room into a cold one, going out-of-doors, may in various cases set up an attack.

The treatment of these cases is identical with that of hay fever and, although it is impossible to be quite certain that a cure will be obtained in any given case, still, local treatment should always be adopted. In the first place any abnormality of the nose should be rectified, a polypus, a hypertrophied turbinate, a septal spur should be removed. Should this fail the best treatment is cauterisation of the nasal mucous membrane. By examining the interior of the nose with a probe very sensitive spots may often be discovered in some part of the nasal mucous membrane. These spots are often found in the region of the anterior end of the middle turbinate and on the opposite part of the septum. They should always be sought for, and if found should be destroyed by the electric cautery. Should this fail the inferior turbinate should be cauterised: this treatment is empirical, but by it the majority of cases may be cured and practically all of them at least temporarily relieved. These measures should be combined with the regular use of nasal alkaline lotions and in addition an oily spray, such as almond oil containing 5 per cent. of menthol, will be found extremely useful. A caution must be here added. Relief, or temporary relief, of the affection during the actual attack may always be obtained by the use of cocaine. The symptoms are relieved in two or three minutes, but the treatment has to be repeated every hour or so. Thus the remedy is a very dangerous one and especially so because in time the drug loses its effect, stronger solutions are required, and severe constitutional depression, insomnia, loss of appetite, and mental disturbances may result. In spite of this, the patient may resort to the drug because of the great relief it gives and thus may originate the cocaine habit. Further, the continued use of this drug apparently aggravates the local condition and renders it far more obstinate to curative measures.

Asthma.—There has been, and is, great dispute as to the pathology of asthma, and many nasal specialists consider asthma to be a purely reflex condition resulting from some pathological change in the nasal mucous membrane. I cannot assent to this proposition and would rather not express any opinion on the etiology of asthma in general. It is an undoubted fact, however, that by treating the nose alone a large number of cases of asthma may be improved and a few may be cured. The probability of a case of asthma being dependent upon nasal trouble is increased if any definite sensitive area or "cough spots" can be discovered in the nose or if, as is not very uncommon, the asthmatic attack is preceded or accompanied by the sudden onset of such symptoms as sneezing, nasal obstruction, and rhinorrhœa.

In the treatment of asthma, therefore, such conditions as nasal polypi, hypertrophied turbinates, and septal deflections should be rectified. In children adenoids should be removed. Sensitive spots in the nasal mucous membrane should be sought for and destroyed with the cautery. If no objective abnormality be found, but yet the onset of asthma be preceded by nasal symptoms, the inferior turbinates should be cauterised as in rhinorrhœa. On the other hand, if the nasal mucous membrane be healthy and there is no clear history of nasal disturbance preceding the asthmatic attack, nasal treatment should not be adopted. As I have said, the results are uncertain and there is no means of determining beforehand which cases will benefit by intranasal treatment. The most successful may be those in which there is no marked disease in the nose.

To turn to a more homely subject the large number of infallible remedies for *a common cold* are still being added to. The latest is cinnamon tabloids. It is directed that at the commencement of a cold two of these should be given every half-hour for three doses and then one every hour for the next 12 hours or until all symptoms have passed off. Apparently they do good in some cases, but I have tried them on myself without any benefit. Orthoform applied locally has also recently been recommended. This drug is a most valuable analgesic in cases of painful ulceration, especially

in the upper air-passages; it is non-poisonous and therefore may be used freely. Taken as a snuff it is said to relieve the excessive irritation of the nasal mucous membrane and thereby to stop the sneezing and excessive discharge. I have not yet had an opportunity of trying it. But in spite of all these drugs I expect that the only reliable remedy is opium or morphia in some form given in sufficient quantities to produce sleep in conjunction with the usual household remedies, which usually take the form of hot whisky-and-water or hot lemon-and-sugar as the case may be.

And now I would conclude with a caution against excessive operating on the nose. Great advantage has followed operations for nasal obstruction, and especially in children, but, as is natural, the zeal of many has outrun discretion and the number of diseases which are claimed to have been cured by the removal of adenoids is so great that the operation is in danger of becoming a panacea. This is partly due to the fact that patients nowadays rarely need encouragement to undergo operation; in fact, they are not happy till they get it, and if it is refused or postponed they go off elsewhere to have it done.

The advantage of normal nasal respiration in children is well recognised. Apart from the local relief to ear and throat troubles the effect on the general well-being is even more marked: stunted children commence to grow, the tendency to bronchitis and constantly catching cold disappears, and delicate children become strong and their intelligence even seems to increase. Should any such cause for the operation be found the removal of adenoids should certainly be undertaken. It is not likely to be followed by any ill result, although the occasional fatality which accompanies this operation should be sufficient to prevent indiscriminate operating. But in adults, in whom nasal obstruction often does very little harm, considerable care should be exercised before extensive operations are performed, and especially before the turbinates or other structures involving the loss of a large piece of healthy mucous membrane are removed. Certainly Nature is resourceful and is often equal to repairing the effects of surgical enterprise, but in many cases the dry nose and throat left after these operations puts the patient in a far worse plight than he was in before treatment.

Harley-street, W.

THE REMOVAL OF SUPERFLUOUS HAIR BY A COMBINATION OF X-RAY EXPOSURE AND ELECTROLYSIS.

BY DAVID WALSH, M.D. EDIN.,
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THERE are few cosmetic operations more desirable from the feminine point of view than the removal of superfluous hairs from the face and other parts of the body. Short of operation various methods are in vogue, such as pulling out the hairs, shaving, and the use of depilatories. None of these plans, however, get at the root of the mischief, while they act more or less as local irritants that by stimulating the supply of blood to the part actually increase the growth of the hair. Depilatories destroy the shaft of the hair but they do not touch the hair bulb. They have been used from time immemorial, but their application would hardly be sanctioned by the modern dermatologist. Some women rub the skin smooth with pumice stone. Others prefer shaving with a safety razor—a plan that is perhaps to be approved when there is a thick downy growth of hairs too numerous to be removed by electrolysis.

The latest method of depilation before the profession is that effected by the x rays. Within nine months of the announcement of Professor Roentgen's discovery there were reported several cases of dermatitis to which I ventured to give the name of "focus-tube dermatitis" in July, 1897.[1]

The earliest note of shedding of hair which I have found recorded was by Mr. E. E. King of Toronto.[2] Since then many instances have been recorded, notably one by Professor Waymouth Reid, who lost the hair of the chest and face after four consecutive daily exposures of the trunk for 20, 40, 50, and 90 minutes respectively.[3] Before long the Roentgen rays—or, rather, exposure to the focus tube—were applied for the depilation of hair. In at least one instance that came under my notice severe and extensive sloughing was caused by the exposure of a chin to the live tube. After a little time it was found that a short exposure of 10 or 15 minutes with the tube a few inches only from the surface of the skin affected the nutrition of the hair to such an extent that the hair became loose and fell out within a week or 10 days of the exposure. The hair bulbs, however, were clearly not destroyed, as the hairs were quickly reproduced. In one case reported by M. Barthelemy and M. Darien the hairs grew again in a guinea-pig that had been depilated 18 months previously by a prolonged exposure to the focus tube. Freund finds that the hair grows again on the face two months after depilation by that method.[4] By applying the rays, however, three or four times every six weeks it is possible, he says, to keep the face permanently hairless. Schiff has also worked on much the same lines. It is evident that any method depending on such repeated applications must be extremely tedious, and no results have hitherto been published which justify absolute success for any plan of the kind. At the same time, the application of the focus tube has to be made by skilled and cautious hands, otherwise the results may be disastrous. For one thing it is certain that the idiosyncrasies of individual patients differ greatly so far as the resulting dermatitis is concerned. Indeed, from my own observations it seemed to me long ago that the susceptibility of the individual worker might vary from day to day. The ideal exposure in depilation is that which suffices to cause the shedding of the hair with little or no apparent erythema or dermatitis. The part of the face around the area to be cleared should be protected with a mask of lead-foil. The drawbacks of depilation by the focus tube, then, are the risk of dermatitis (a small one under modern methods and in skilled hands) and, above all, the re-growth of the hair.

Electrolysis, on the other hand, is an effectual but tedious agent. It can hardly be applied in cases where there is a thick, close growth of hair, as each one has to be destroyed by the electrolysis needle. In the hands of the most skilful operator it is not always possible to direct the needle in the direction of the hair-follicle. Fortunately, from experiments conducted by Giovannini[5] it appears that destruction of the papilla may follow even though the needle has pierced the wall of the hair sac and cauterised the surrounding tissues. There is no need here to describe the details of this small operation. The needle is connected with the negative pole of a battery yielding from 1 to 1·5 milliampères, and the circuit is completed by pressing a sponge electrode saturated with warm salt water against the patient's skin. The circuit should not be completed until after the needle is inserted into the hair-follicle and the current should be broken before the needle is removed. The operator must insert the needle as nearly as possible in the direction of the hair-follicle. It should be kept in place for 20 or 30 seconds until little bubbles of gas appear at the point of insertion. After the removal of the needle, if the operation has been successful, the hair can be removed with gentle traction by a pair of forceps. The painfulness of the method forms one of the chief objections to electrolysis, and it varies much with the individual. To those who have the requisite patience and resolution, however, it offers the best chance of permanent removal of superfluous hairs.

Some time since it occurred to me that a combination of the two methods of focus-tube exposure and electrolysis might be of advantage. I have found the following method useful where the growth is not too thick. The exposure to the focus tube is made in the ordinary way and a week or ten days later, when the hair becomes loose, each hair is extracted and the electrolysis needle is passed into the follicle. This method means that a large number of electrolytic punctures must be made in a small area. However, with a little management the removal may be made to extend over a couple of days, and in that way it is possible to remove, so to speak, alternate hairs. Sometimes a second exposure to the focus-tube is needed before the hairs become loosened.

This combined method I have found useful in some cases, as it increases the chances of effectual cauterisation of the emptied hair-follicle. At the same time it shortens the

[1] Transactions of the Dermatological Society of Great Britain and Ireland, vol. iii., p. 13.
[2] British Journal of Dermatology, January, 1897.
[3] D. Walsh: The Roentgen Rays in Medical Work. London, second edition, p. 205.
[4] Wiener Klinische Wochenschrift, Sept. 22th, 1899, p. 966.
[5] Archiv für Dermatologie und Syphilis, August, 1896.

period of depilation, but, like pure electrolysis, it should not be undertaken unless the patient has enough resolution and patience to undergo the requisite treatment.

Grosvenor-street, W.

A CASE OF SEPTICÆMIC PLAGUE IN A EUROPEAN.

By J. M. ATKINSON, M.B. LOND., D.P.H. CANTAB.,
PRINCIPAL CIVIL MEDICAL OFFICER, HONG-KONG.

A BOY, aged 11 years, the son of a European inspector of police living at No. 8 police-station, was admitted to the Government Civil Hospital, Hong-Kong, on Sept. 9th, 1901, with the following history. He was quite well until the previous Saturday when he complained of abdominal pain. A medical man visited him on that day and prescribed castor oil; after taking this he vomited. On admission to the hospital at 9.30 A.M. his temperature was 102·4° F. He complained of pain in the abdomen and on examination the pain appeared to be chiefly in the right iliac fossa where there was on palpation a sense of resistance. His tongue was foul. His evening temperature was 102°. On examination of the blood no malarial parasites were found. On the 10th the pain was still the same and the patient was very drowsy. On the 11th a papular rash was noticed which was confined to the face, the neck, and the chest. In the evening he was delirious and he still complained of abdominal pain; there was some tympanites. As his temperature still kept up his blood was examined again, but no malarial parasites were found. On the 12th it was ascertained that during the night he had been vomiting bile-stained fluid tinged with blood. The stools were liquid and bile-stained, there was slight epistaxis, and the abdomen was still much distended and tender generally. A few malignant ring-formed malarial parasites were found on this day in the blood. On the 13th the patient seemed much worse. On examination there was evidently some fluid in the abdominal cavity. There was dulness in either flank which disappeared on change of position. For the preceding two days three grains of the bisulphate of quinine had been given hypodermically. The evening temperature was 102·8°, the pulse was 120, and there was constant vomiting. The specific gravity of the urine was 1030, with one-eighth albumin and no sugar; it gave an acid reaction. On the 14th at 6 A.M. the temperature was 105° and the patient was evidently sinking fast. He died at 2 P.M.

A necropsy was made on Sept. 15th at 9 A.M. Rigor mortis was well marked. On opening the abdomen there was some bloody ascitic fluid present. The small intestine was normal but distended. The cæcum was swollen, with hæmorrhagic extravasation into its walls, and there was a mass of enlarged hæmorrhagic glands (mesenteric) occupying the inner side of the cæcum and obstructing its lumen. There was also hæmorrhagic retro-peritoneal extravasation. On examining the enlarged gland tissue that and the spleen were found to be full of plague bacilli, which decolourised by Gram's method.

This case aptly shows what a perplexing disease plague is. The epidemic here has practically ceased for some weeks now, the number of cases reported from August 10th to Sept. 7th being 16, and this being the only European case during that time. The case was diagnosed as one of severe malarial colitis.

Hong-Kong.

FRÖBEL AND CHILD STUDY ASSOCIATION.—The second annual meeting of the Manchester Fröbel Association, with which the local branch of the British Association for Child Study is amalgamated for all meetings, was held on Oct. 18th. The report showed that there were 160 members as compared with 120 in the previous year, to which must be added 40 members of the Child Study branch. Professor Withers afterwards gave a lecture on "The Distinction between Work and Play." The educational uses of the latter were well illustrated, especially for the young child, for whom Fröbel more especially provided. Play in the child was described as the total self-activity of the child not as yet distinguished from work. A child was never so earnest as when playing, and he liked his play to be taken seriously.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

AGUE CONTRACTED IN A NON-MALARIOUS DISTRICT.

By J. LIONEL STRETTON, L.R.C.P. LOND., M.R.C.S. ENG.,
SENIOR SURGEON TO THE KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.

THE mode of infection of ague has attracted so much notice of late that the following case will probably be of interest.

A woman, about 38 years of age, went to stay at Weston-super-Mare and whilst there she developed an attack of tonsillitis. During this illness she was visited by her brother who had lately returned from India where he had suffered from ague. On her return home she developed ague. Her description of the attacks is as follows: "I feel as if I was going to be ill; faintness and coldness, followed by severe shivering, during which I cannot hold anything. This cold feeling lasts about three hours and is followed by a feeling of extreme heat. My temperature is high; in one attack it was 106°. The hot stage lasts four or five hours and is accompanied by profuse perspiration which leaves me very weak and good for nothing. The attacks come on on alternate nights."

When I first saw the patient I had little doubt from her description of the attacks that she was suffering from ague, and I put her on five grains of salicylate of quinine three times a day which entirely checked them. A few weeks later when visiting in London she omitted her treatment and had a slight recurrence. At the present time, four months after her first attack, five grains of salicylate of quinine are sufficient to prevent the attacks.

In discussing with the patient the possible source of infection she naturally turned to the presence of her brother at a time when she was debilitated with an attack of tonsillitis and consequently in a susceptible condition. I explained to her how infection was often conveyed by mosquitoes and she at once informed me that she had a severe bite from an insect on the forehead during her brother's visit. There was no doubt whatever about this because it caused so much swelling that her sister inquired about it the next day. She could not remember the exact date of the bite, but she thought it was about a month before her first attack of ague.

I am not prepared to say what species of insect inflicted the wound on the forehead, but it appears to me probable that it was by that means that the poison was introduced. It may have been a mosquito secreted about the person of her brother—though as he had a new rig-out of clothes this was unlikely—or it may have been a stray member of the same species which had arrived through some other channel; but perhaps the more likely explanation is that some insect first attacked the brother and thus conveyed the *materies morbi* to the sister. If such a means of infection were to become common the presence in this country of ague subjects would be viewed with alarm.

Kidderminster.

A RAPID CASE OF DIABETES.

By R. E. H. WOODFORDE, M.R.C.S. ENG., L.R.C.P. LOND.

A MAN, aged 23 years, came to me on Sept. 16th suffering from acne vulgaris of the face. A few of the spots were pustular. He was given boric acid ointment, and a week later the rash had much improved; he then complained of "feeling hot in his inside," but was not thirsty. He took a mixture containing bicarbonate of sodium and tincture of nux vomica for a week. On Sept. 30th his mother asked for more medicine and mentioned that he was thirsty. At my request he came to me the same day after he had done his usual work. He complained of being thirsty, but was confident that he had only been so for a few days. His bowels were confined and he felt weak. Examination revealed nothing except a raw beefy-looking tongue. His urine, however, contained sugar (no quantitative estimation was made),

with a specific gravity of 1037. On the following day he was admitted to Hitchin Infirmary under the care of Mr. R. Shillitoe who kindly sent me the following particulars: "He seemed rather dull and stupid when I saw him at 11 A.M. on Tuesday (Oct. 1st), but not having seen him before I naturally thought it was his normal condition. He had a dry parched tongue when I saw him in the afternoon and was, of course, very thirsty. He passed 171 ounces of urine on Wednesday but none after 6 A.M. on Thursday until shortly before his death at three in the afternoon. He was very sick and complained of cramp in his legs. The coma gradually increased from the time of his admission to his death. He had no convulsions. His bowels were very much constipated on admission and he complained of a good deal of abdominal pain, but they were freely relieved on Wednesday."

There is nothing of importance in his family history and he had had no severe illness. He indulged too freely in alcohol at times. It is noteworthy that he was able to work on the day previous to the onset of coma and he had been cycling on the Sunday before.

Ashwell, Baldock.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

RICHMOND (SURREY) AND HESTON AND ISLEWORTH JOINT HOSPITALS. DOCKWELL SMALL-POX HOSPITAL, HOUNSLOW.

TWO CASES OF CONFLUENT SMALL-POX AND ONE CASE OF DOUBTFUL MODIFIED SMALL-POX (VARIOLOID).

(Under the care of Dr. J. H. CROCKER.)

AT the present time, when small-pox is somewhat prevalent in London, the following interesting cases of the disease are of special value. The first case illustrates the severity of the disease in pregnancy and the second case the bad prognosis when the disease has been contracted just before birth. The third case demonstrates the very great difficulty there may be in diagnosing small-pox when it occurs in patients who have already been vaccinated. It is sometimes practically impossible to make a diagnosis without the aid of a history of infection and the subsequent progress of the case.

CASE 1.—A married woman, aged 39 years, was admitted into hospital on the evening of Sept. 25th, 1901. The patient had been confined of a male living child on the 22nd. She had noticed some spots on her face and body the day before her confinement, but she thought that it was possibly chicken-pox as two children in the same house had been suffering from this disease (?). The medical officer of health of Heston and Isleworth (Dr. E. J. Steegmann) saw the patient in consultation on the 25th and advised her immediate removal to the Dockwell Hospital. Dr. Crocker, together with Dr. Steegmann, saw the patient on the 26th and found well-marked small-pox in the vesicular stage confluent on the face, hands, arms, and chest. There was also evidence on the palate and buccal mucous membrane. There was no evidence of peritonitis; there were some lochia. The temperature was 105° F. The patient rapidly became worse, the lochia ceased, and she was semi-conscious on the 27th. On the 28th the eruption on the face was somewhat livid in colour, the pocks were all merged, and there were depressions of umbilification around the lips and the alæ of the nose. The features were unrecognisable; the face, throat, and tongue were swollen. The hands and arms were swollen, the eruption on the extremities was coherent, giving an appearance of boiled sago grains. The patient was unconscious. On the 29th her general condition was worse. There was difficulty in swallowing, the tongue and lips were typhoid-like, and there were sordes on the teeth. There was some hæmorrhage in the pustules on the face around the mouth. The eruption was pustular. The breathing was rapid. The patient died on the 30th at 2.25 P.M. As regards the temperature this gradually dropped from 105° at the commencement of the illness to 99° on the 30th.

CASE 2.—The infant child of the patient in the above case was admitted into the hospital along with his mother. He was vaccinated by Dr. Steegmann on Sept. 26th and at a later stage by Dr. Crocker. No result followed on either occasion. The child was, as already stated, born on the 22nd and he remained well until the 30th when he became feverish and vomited his milk. On Oct. 2nd a few spots were noticed on the face and on the 3rd there were several spots all over the face, body, and extremities, shotty in character to the touch. On the 4th the spots were larger and more profuse. On the 5th the eruption was confluent on the face and on the arms and hands, and on the 7th it was very shotty all over, being vesicular on the face. On the 9th the eruption was umbilicated and was getting pustular on the face; there was large vesicular eruption on the extremities. On the 11th a pustular eruption was present all over the face; there was some hæmorrhage in the pustules around the lips and the eruption was becoming pustular on the body. On the 12th the infant died at midnight. The temperature dropped from 103° F. at the commencement of the illness to subnormal on the day before death.

CASE 3.—A man, aged 25 years, was admitted into hospital on Sept. 29th. At the request of a general practitioner Dr. Crocker saw the patient before his removal. The history given was that on the previous day he had not felt well and that he had had slight pain in the back and had vomited. He had not been near any infectious disease as far as he was aware, but he had been "knocking about" London during the past month. On the morning of the 29th he did not feel well and he noticed that his face was covered with spots, so he sent for his medical attendant. At the time of Dr. Crocker's visit there was a profuse papular eruption all over the forehead and face; many discrete papules were present on the extremities and trunk, particularly on the back, over the shoulders, and extending up to and amongst the roots of the hair. The eruption was shotty to the touch. The temperature was 103° F. The patient had not been revaccinated, but there were two well-marked cicatrices (area about half an inch), the result of vaccination in infancy. The patient was revaccinated in four places by the public vaccinator and was removed to Dockwell Hospital and placed in the observation block on the evening of Sept. 29th. On the following day the eruption was more marked, being very shotty. The temperature was 102°. On Oct. 1st there were some spots on the face which were vesicular. The temperature was 101°. On the 3rd similar spots were observed on the back and chest. The temperature was 100°. On the 4th many of the spots on the face and elsewhere were disappearing, not having gone beyond the papular stage. The temperature was 99°. On the 5th there were slight brownish scabs on some of the pocks on the face and back; many others were drying up. The temperature was 99°. On the 7th one pock on the abdomen was large, umbilicated, and pustular; the others were drying up and disappearing. The temperature was 99°. On the 10th the face was nearly clear excepting for five or six slight superficial pittings, each slightly moist at the bottom. The pustule on the abdomen was scabbing. The temperature was normal. On the 12th there were a few scabs on the trunk; the remainder had dried up and almost disappeared. The temperature was normal. The patient was allowed to get up. In this case vaccination was for some days apparently without result, but slight papules appeared on three of the insertions on the fifth day. These three gradually developed and reached on the thirteenth day the stage usually arrived at in eight days. The condition on Oct. 12th was that one pock was of the size of a threepenny-piece and the other two were slightly smaller, a slight red zone being around each—that is, just in the stage when one in the old days took "matter" from the arm.

Remarks by Dr. CROCKER.—The patient in Case 1 had never been revaccinated, but she thought that she had been vaccinated when she was an infant. There was one doubtful cicatrix on the right arm, but owing to the eruption it was impossible to be certain.

As the eruption in Case 2 appeared 10 days after birth it is probable that the child contracted the disease in utero. Dr. Steegmann vaccinated two other patients from the same

lot of lymph as he used for this infant, and as these took well it is probable that the advanced stage of incubation of the disease prevented the vaccination from having any effect.

As regards Case 3 the question is, Was this a case of varioloid or of chicken-pox? There was no evidence of syphilis. Chicken-pox generally affects children; this patient was 25 years of age. In chicken-pox the temperature is very little raised in adults, as a rule, and quickly regains the normal; the temperature in this case was 103° to begin with and ended in a lysis, dropping about a degree each day to 99° and then, after remaining at this for three days, dropping to normal. In small-pox the rash generally comes out all at once in the same region, as it did in this case; whilst in chicken-pox the papular eruption comes out in a series of showers at daily or longer intervals, which did not occur in this case. In chicken-pox there is no, or very little, rash on the face as a rule; in this case the eruption was most profuse on the face, many, however, aborting in the papular stage. In one respect this rash simulated chicken-pox, being profuse over the shoulders and up to the roots of the hair at the back, a few spots being amongst the hairs. In two instances the papules formed crescents, one crescent being on the forehead and one on the abdomen, said to be characteristic of small-pox (Marson). Only one pock went the cycle of non-modified small-pox. Notwithstanding the fact that three out of the four vaccination insertions took, after some delay—which sometimes occurs with calf lymph under normal conditions—the case appears more like varioloid than chicken-pox.

LEICESTER INFIRMARY.

TWO FATAL CASES OF PERFORATED DUODENAL ULCER.

(Under the care of the late Dr. J. ST. T. CLARKE and Mr. G. C. FRANKLIN.)

THE etiology of ulcer of the duodenum is very obscure. In some cases a duodenal ulcer is associated with ulceration of the stomach, and therefore it may be considered as probably produced by similar conditions. Against this view is the rarity of duodenal ulcer in women, though of the three cases recorded below two of the patients were of the female sex. Dr. Lee Dickinson[1] maintains that the women in whom it occurs are not young, but in both the female cases recorded below the age was 20 years. The association of duodenal ulcer with burns was first pointed out by Mr. Curling, but it is apparently rarer to-day than it was formerly. It has been suggested that the ulceration is the result of the excretion of septic substances absorbed from the large suppurating surfaces met with in burns and the occurrence of certain cases in which duodenal ulcer appears to have resulted from extensive internal suppuration favours this idea. Within recent years many cases have been recorded where hæmorrhage from the stomach and duodenum has occurred after operations, not necessarily on the abdomen—for instance, Eiselsberg[2] reported a case in which the hæmorrhage followed an operation for malignant disease of the tonsils and cervical glands. It is possible that there is some connexion between such cases as these and duodenal ulceration. For the notes of the following cases we are indebted to Dr. F. Bolton Carter.

CASE 1.—A young woman, aged 20 years, was admitted into the Leicester Infirmary on Jan. 5th, 1901, under the care of the late Dr. Clarke. The patient had had pain and vomiting after food for several months. 20 hours before admission she had been suddenly seized with severe pain in the abdomen and collapse. On admission she was pale and somewhat collapsed. Her abdomen was distended with a tympanitic note all over. There were some increased resistance and tenderness in the epigastric region. The abdomen was opened at once in the mid line above the umbilicus, and a perforated ulcer on the anterior wall of the stomach near the great curvature was found. This was stitched up with double rows of Lembert sutures. Another opening through the abdominal wall was made below the umbilicus, the peritoneal cavity was irrigated and wiped out, and drainage-tubes were inserted. The patient appeared to be doing extremely well for the next two days, and then vomiting commenced, with a great deal of pain in the abdomen. Signs of general peritonitis now became present and she died on Jan. 10th.

[1] Transactions of the Pathological Society of London, 1896.
[2] Archiv für Klinische Chirurgie, 1899, vol. lix., part 4.

Necropsy.—On opening the abdomen post mortem it was found that there was general septic peritonitis. The stitched peritoneum over the gastric ulcer was firmly adherent, tearing apart with some difficulty. The appendix was healthy. On the anterior surface of the second part of the duodenum a perforation of about the size of a threepenny-piece was found. There were no other ulcers in the stomach or intestines.

CASE 2.—A man, aged 45 years, was admitted into Leicester Infirmary on Nov. 7th, 1900, with a history of having passed no urine for six days. He complained of slight pain in the right lumbar region. On the third day after admission, no urine having been passed, the right kidney was explored through the usual lumbar incision. The kidney was incised but no stone was found, and the hæmorrhage being severe the wound was plugged. On the next day the plugs were removed and a tube was inserted, urine coming freely through the wound. On the third day after the operation the patient passed seven ounces of urine per urethram. For the next seven days none was passed by the urethra, when 28 ounces were passed, and from this time he continued to pass a fair quantity daily. The quantity of urine from the wound now gradually decreased and the wound healed in about six weeks' time from the operation. Five weeks after the operation he had a severe rigor with a temperature of 105° F., and his temperature kept going up with rigors for about a week, during which time he complained of great pain on passing urine. His bladder was sounded for stone with negative result. His temperature now became normal and he was discharged on Jan. 1st, 1901, apparently well.

On June 1st he was readmitted under the care of Mr. Franklin with the history that eight days before he was suddenly seized with acute pain in the abdomen; he had been in bed since, had not vomited, but had had some diarrhœa, and had noticed that his abdomen had become swollen. There was no history of pain after food. On admission he had an anxious expression and his eyes were sunken. The pulse was 130 and small and the temperature was normal. The abdomen was very distended but not tender and it moved slightly during respiration. There was no liver dulness or dulness in the flanks. There was a tympanitic note all over. Perforative peritonitis being diagnosed, the abdomen was opened in the median line, mid-way between the pubes and the ensiform cartilage. The abdominal cavity was found to be full of *fæcal* smelling pus, and the incision was then enlarged downwards and the appendix was sought for; this was found to be inflamed and was removed. The patient's condition being very bad the peritoneum was rapidly flushed out and the wound was closed, a drainage-tube being inserted. The patient died five hours after the operation.

Necropsy.—At the post-mortem examination a large perforated ulcer on the anterior wall of the first part of the duodenum was found. On opening the duodenum two other large ulcers were seen, one opposite the perforation involving all the coats except the serous, and the other a little lower down involving the mucous coat only. There were two small superficial ulcers in the stomach. The lower lobe of the left lung was collapsed. The right kidney had some scar-tissue from the old incision. There was no trace of calculi. Two small calculi were present in the renal substance of the left kidney.

Remarks by Dr. BOLTON CARTER.—I met with a case at the Royal Halifax Infirmary which might well be narrated in connexion with the two cases just recorded. A young woman, aged 20 years, was admitted into the Royal Halifax Infirmary on Oct. 29th, 1900, with a large tender fluctuating mass in the right iliac region. The temperature was 101·6° F. An abscess in connexion with the appendix being diagnosed Dr. E. West Symes, under whose care the patient was admitted, asked me to operate. An oblique incision internal to the right anterior superior iliac spine was made and a large quantity of foul-smelling pus was let out. The abscess cavity, which appeared to be well shut off from the general peritoneal cavity by adhesions, was flushed out and a cursory examination failing to discover the appendix, the wound was partially closed with silkworm-gut sutures and drained with a rubber tube. This was dressed twice daily and the patient's condition improved rapidly until Nov. 8th, when she complained of severe pain over the abdomen, not localised, and commenced to vomit. The pulse was 120 and she was rather collapsed. On the next day on dressing the wound some blood appeared to come from the upper and deeper part of it. Signs of general

peritonitis rapidly supervened and the patient died on Nov. 10th. At the post-mortem examination it was found that there was well-marked general septic peritonitis. The appendix was in a sloughing condition, lying deeply over the pelvic brim, with no pus in its immediate neighbourhood. There was some blood-clot in the right lumbar region of the peritoneal cavity which appeared to have come from a perforated ulcer on the anterior surface of the second part of the duodenum. Some blood-clot was also present in the duodenum. There was no other ulceration in the duodenum, stomach, or intestines. There had been no history of previous gastric trouble.

In the case at the Royal Halifax Infirmary and in the first of the two cases at the Leicester Infirmary the patients were young women, whereas duodenal ulcer is more frequently met with in men. In both cases there was a septic condition in the peritoneal cavity which appeared to be doing well when the fatal complication occurred, and in both the duodenal perforation was situated in exactly the same position. In neither case was the perforation diagnosed, extension from the original seat of trouble being suspected, although in the first case it might have been; the cause of the hæmorrhage from the wound, however, was by no means obvious.

In Case 2 at the Leicester Infirmary it is difficult to connect the renal trouble for which this patient was first admitted in any way with the peritonitis causing his death. Was it possible that the abdominal mischief was due to an acute appendicitis, the ulceration in the duodenum and stomach being secondary to the septic peritoneal condition, as probable in the other two cases? It appears to me more likely that the duodenal perforation was the primary lesion and the inflamed condition of the appendix was due to the general peritonitis, the inflamed gut allowing organisms to escape through the walls and giving rise to the fæcal odour of the pus. Another interesting point is the long duration, eight days, and the fact that the patient with his abdomen full of stinking pus *walked* into the surgery. The presence of the large quantity of fluid in the abdomen was completely masked by the great distension of the intestines. The complete absence of all tenderness and the definite movement of the abdomen during respiration are in my experience uncommon. The fact that no trace of calculi was found post mortem in the right kidney and that two were found in the left kidney makes one wonder whether the wrong kidney was explored at the first operation, and whether the pain on the right side was due to duodenal ulceration at that time. The man seemed quite positive that he had never had any pain after food, or other symptoms, at any time, although it is difficult to imagine that so much ulceration in the duodenum and stomach could have existed for any length of time without giving rise to symptoms. This appears to me rather in favour of the view that some, at all events, of the ulcers followed the septic condition of the peritoneum.

After looking through some of the literature on the subject I have been able to collect 59 published cases of perforated duodenal ulcer. In these cases 27 of the patients died without operation, the lesion being found post mortem. The remaining 32 cases were operated upon and 11 of the patients recovered. With the above three cases this gives a mortality of about 82·3 per cent.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Typhoid Fever in South Africa.

A MEETING of this society was held on Oct. 28th, Dr. W. H. ALLCHIN, the President, being in the chair.

Dr. A. ELLIOT and Dr. J. W. WASHBOURN communicated a paper upon Typhoid Fever in South Africa. They analysed the records of 262 cases which were admitted into the Imperial Yeomanry Hospital at Deelfontein and then compared these with Dr. T. B. Poole's cases at the Emergency Hospital at Maidstone during the epidemic of 1897 and with other statistics at the Metropolitan Asylums Board hospitals and the Johns Hopkins Hospital. Their object was to ascertain whether the type of fever in South Africa was the same as that occurring in England and America. The mortality of their cases was 13·7 per cent.—practically the same as that at the Metropolitan Asylums Board hospitals during the year 1900, and that of the Worthing epidemic, but almost double that of the Maidstone epidemic and the Johns Hopkins Hospital cases. The incidence of relapse was 11 per cent.—practically the same as that of other statistics in England and America. They pointed out that early removal of the patients and improper feeding on the journey predisposed to relapse. The average interval between the end of the primary attack and the commencement of the relapse was 10·8 days, which appeared to be similar to that of other statistics. The longest interval between the end of the attack and relapse was 31 days. None of their cases which relapsed died. In 12 of their cases there was a history of a previous attack of enteric fever, an incidence of 4·5 per cent. Dr. Crombie had recorded an incidence of 6 per cent. amongst 150 officers who had been invalided from South Africa. The frequency of second attacks they attributed to the constant exposure to infection and to privation experienced by the patients. The mortality was 10·7 per cent. in 186 patients who had not been inoculated, while the mortality was 16 per cent. among 25 patients who had been inoculated. Adding together cases recorded at other hospitals the mortality among 120 cases inoculated was 7·4 per cent., and among 556 cases not inoculated 10·9 per cent. They did not consider that this difference pointed to any marked beneficial influence of inoculation. With regard to the influence of the inoculation upon the incidence of the disease, 59 of their staff were inoculated, of whom four contracted enteric fever. 25 were not inoculated, and of these four also contracted enteric fever. The four cases among the non-inoculated who contracted the disease came from among the dressers who were younger than the rest of the staff. Adding together various other statistics they found that of 224 persons inoculated the incidence of attack was 11·4 per cent.; and of 157 persons not inoculated the incidence was 14·6 per cent. From these figures they drew the conclusion that inoculation was not of any practical value in preventing the disease. They drew attention to the considerable risk of contracting enteric fever incurred by persons engaged in attending to the sick, the incidence of attack among them being 12·7 per cent. Hæmorrhage amounting to several ounces of blood occurred in 6·1 per cent. of their cases; the incidence corresponding about to the average. Half of their cases of hæmorrhage died, a much higher percentage than occurred in England or America. Phlebitis occurred in 5·6 per cent., the incidence at Maidstone being 3·8 per cent., in Caiger and Goodall's statistics 3·4 per cent., and in Osler's 1·9 per cent. The latest date of the appearance of phlebitis after the end of the attack was 30 days. Pneumonia occurred in 3·05 per cent. of the cases, the mortality being 50 per cent. Periostitis, perforation, and parotitis occurred in about the usual proportion. There was constipation in 42·7 per cent. of cases. At Maidstone it occurred in 50 per cent. of the cases, at the Johns Hopkins Hospital in 34 per cent., and at the Edinburgh and East of Scotland Hospital in 37 per cent. It thus followed that constipation was more common both in South Africa and in England and America than was usually imagined. Rapid pulse was frequently observed in patients who had been previously exposed to fatigue, and there was often cardiac collapse quite out of proportion to the severity of the attack. In two cases of convulsions one was attributed to the administration of strychnine. Abdominal pain, sometimes so acute as to suggest perforation, occurred in several cases. In several cases there was difficulty in micturition at an early stage of the disease. Cases of appendicitis immediately preceding and immediately following enteric fever were recorded. A case of hepatitis was also described. Twenty-one cases associated with dysentery were recorded as arising during the attack or during convalescence and it was a symptom of serious signification, the mortality being 33·3 per cent. Rigors were observed in 11 cases; in two of these they were due to malaria, the parasite having been discovered in the blood. Arthritis was not uncommon during early convalescence. In a limited number of cases it was due to rheumatism. In the others it appeared to be allied to the arthritis occurring in scarlet fever. Other complications, such as tender toes, epistaxis, pericarditis, and eruptions of different kinds, were considered. The conclusions drawn by Dr. Elliot and Dr. Washbourn were that the type of disease in South Africa was practically the same as that met with in England and America, and that inoculation was of little practical value.

Dr. WILLIAM CAYLEY, referring to the causation of the

disease, said that although in this country almost all the epidemics were due to contamination of the water-supply it was clear that the means of infection in the tropics was frequently by other agents, such as dust and flies. It would be of interest to know if the clinical type of the disease varied with the different modes of infection. He congratulated Dr. Elliot and Dr. Washbourn on the low mortality. He considered that the evidence in favour of the immunity conferred by inoculation was sufficiently strong to make it desirable that it should continue to be used.

Professor A. E. WRIGHT (Netley), referring to the question of inoculation, said that although the general circumstances in South Africa were such that the results were not so favourable as those obtained from India, yet he was of opinion that some benefit was obtained from inoculation, however bad the general surroundings. He certainly considered that inoculation was advisable for India. In judging of the statistics there were several points to be taken into consideration. One of the most important of these was as to how long the patient had been inoculated. There was a negative phase which often followed an excessive dose, and he quoted the case of a man who had been inoculated three times and yet got typhoid fever. He himself had had three injections against Malta fever and yet he got the disease. It was certain also that the injection would only protect for a short time and he quoted statistics proving the value of being inoculated twice. He said that it was becoming evident that the dose had to be carefully adjusted and he now gave a small dose and repeated it, and in this way he avoided the negative phase. It was certain, also, that in some cases the injection afforded no protection, as was shown by the bactericidal property of the blood. He did not consider that age made any essential difference to the incidence of the disease.

Surgeon-General HENRY CAYLEY quoted statistics from the Scottish National Hospital, South Africa. He said that it was often difficult to obtain evidence from the soldiers as to whether they had been vaccinated or inoculated. Of the 54 persons who composed the first section of the hospital all but three were inoculated twice, two were inoculated once, and one not at all. Not one of the 54 got enteric fever though exposed to infection, and of these 25 were medical students between 19 and 24 years, the most susceptible age. In the second section, out of 102 persons 74 had been inoculated (some twice, some only once); of these five had enteric fever. Of these five, three had not been inoculated and two had been inoculated. Of 35 nurses 32 were inoculated twice, two were not inoculated, for they had recently had enteric fever, and one refused to be inoculated and she became infected with enteric fever. He certainly thought this evidence proved the value of inoculation for a certain time, possibly from five to six months. He believed also that inoculation made the attacks less severe. The cases of arthritis met with arose (he believed) rather in association with Malta fever than with enteric fever, and he thought the former fever occurred more frequently than was generally recognised. He said that the blood examination of the members of the first section of the hospital some months after they had been in South Africa still gave a high reaction, nearly all these having been inoculated twice; in the second section, however, which came out later, the reaction was poor, seeming to point to the fact that the inoculation had not been so efficiently carried out.

Dr. HOWARD TOOTH said that his figures, though small, were favourable to inoculation. He thought that the more severely the person reacted to the inoculation the less likely was he to be immune, and in Bloemfontein officers who had had severe reaction did not seem to be protected. With regard to immunity he classed individuals under three heads: (1) persons who were naturally immune; (2) persons who could be rendered immune by inoculation; and (3) persons on whom no immunity could be conferred. He believed that most individuals belonged to the second group.

Dr. H. D. ROLLESTON said that with regard to inoculation it was clear that it did not absolutely protect, but the statistics seemed to show that fatal results did not occur so frequently in the inoculated as in the uninoculated. It was important to take into consideration the interval elapsing between the inoculation and the attack of typhoid fever, and this had been on the average 38 weeks. Relapses and second attacks had been of common occurrence. He believed that there were several different strains of the typhoid bacillus and that an individual infected with two or more strains was not proof against other strains. He thought that the serum for inoculation should be prepared with mixed strains from as many different sources as possible. He pointed out that although thrombosis was common yet there had been no case of pulmonary embolism.

Surgeon-General MUIR said that before accepting inoculation as of value far more statistics were needed. He thought that the source of enteric fever, though commonly water, was often conveyed by other means.

Dr. E. W. GOODALL said that with regard to causation too much stress had been laid upon the water-supply, and he was convinced that this was erroneous, for many cases arose in those attending the sick. All the complications which had been mentioned as occurring in South Africa after enteric fever he had seen in England, and he had also seen ulcerative colitis follow on an attack of typhoid fever.

Dr. WASHBOURN, in reply, said that although enteric fever could be contracted in different ways he could not say that the clinical type of the disease was different. The test to which inoculation had been put in South Africa had been severe, but it was in those cases where persons were frequently exposed to infection that it should be of greatest service; he did not consider that it should be resorted to in England where the sources of infection were comparatively few. Neither did he think that the inoculation should be lightly undertaken, for he had seen an officer laid up for three weeks with pyrexia after injection. He did not consider that the immunity of an individual could be estimated by the bactericidal capacity of his blood. He regarded the arthritis which occurred in the same light as the arthritis which occurred after scarlet fever. He suggested that the thrombosis which was of frequent occurrence might be due to the deficiency of salts in the food.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Oct. 25th, Mr. HOWARD MARSH, the President, being in the chair.

Dr. RAYNER BATTEN and Dr. LEONARD GUTHRIE showed a boy, aged 12 years, with Right-sided Hemiparesis and Atrophy of the Left Optic Disc. He had fractured his left femur in October, 1900, and whilst laid up had had a doubtful attack of acute rheumatism. In February, 1901, he noticed weakness (gradual) of the right arm and of the legs, with difficulty in writing and in walking. When seen on April 30th, weakness, ataxy, and intention tremors were noted in the right arm. The right leg was wasted, the knee-jerk was exaggerated, ankle clonus was marked, and a typical Babinski's plantar reflex was present. Sensation was normal. A faint presystolic bruit was present. The veins of left optic disc were engorged, but there was no swelling of the disc. On June 28th the condition of the discs was as follows. The left optic disc was pale and excavated. The cribriform plate was exposed at the bottom of the excavation. The disc was not filled in or opaque. There was no blurring of vessels or of the margins of the optic disc. There was a well-marked central scotoma for white (no colour perception). The retina in the macular area and up to the optic disc showed signs of disturbance and a number of fine white dots. The veins were somewhat large, dark, and tense. The right optic disc was normal. No hemianopsia was present. On Oct. 1st the paresis was much improved and the vision of the left eye was very slightly impaired. It was suggested that the patient might have had thrombosis in the neighbourhood of the left motor tract with retro-bulbar neuritis of the left optic nerve, or the condition might be due to early disseminated sclerosis.—Dr. F. E. BATTEN said that he did not think the condition was due to disseminated sclerosis. He had seen a similar case in a female, aged 25 years, who suddenly became hemiplegic on the right side with aphasia and complete blindness in the left eye. The patient died some two years later and at the necropsy it was found that there was softening in the distribution of the left middle cerebral artery and the left optic nerve was completely degenerated owing to thrombosis of the vessel supplying this region.—Dr. BATTEN, in reply, said that he thought the presence of a central scotoma pointed to a vascular lesion.—Dr. GUTHRIE said that the remarkable recovery which the boy had made seemed to him to be in favour of a disseminated sclerosis rather than a vascular lesion.

Dr. J. P. PARKINSON showed a case of Glénard's Disease.

The patient, a married woman, aged 40 years, had had five children. She complained of symptoms due to stenosis and regurgitation of the mitral valve and cardiac dilatation. The abdomen was very large and flabby from relaxation of the muscles of the abdominal wall. When lying on the back the lower limit of the liver could be felt a finger's-breadth below the level of the umbilicus and its dulness above extended to the costal margin, but in the erect position it fell to a much lower level. It could be freely moved about between the two hands. The spleen was also felt to be somewhat enlarged, prolapsed, and moveable. The right kidney could be easily felt as a moveable mass below the right limit of the liver, from whence it could be pushed back into the loin. The left kidney appeared to be normal in position. The stomach seemed to lie somewhat below its usual level and to be slightly enlarged. For a week in the middle of June the patient suffered from a constant pain in the right loin which extended from thence to the anterior superior iliac spine, and during this period the urine, which previously had contained only a trace of albumin, diminished to half its usual amount and contained two-fifths of albumin. When the pain ceased the albumin, and for a few days the amount of urine, increased to three or four pints daily. This temporary interference with the functions of the kidney was the only symptom referable to the large amount of visceroptosis present.

Dr. SEYMOUR-TAYLOR showed a case of Congenital Absence of both Clavicles. The patient was a man, aged 20 years, in whom both clavicles were incompletely developed. On each side the sternal ends, with the attachments of the sterno-mastoid muscles thereto, could be felt, and there appeared to be some attempt at development towards the acromial end. The intervening space was occupied by what appeared to be fibrous structure, possibly representing the costo-coracoid membrane. The upper limbs were not impeded in their various movements; indeed, the patient had no previous knowledge of his defects. On the other hand, he could throw a ball and play cricket as well as most youths. Both shoulders could be so far approximated to the middle line that the eminences of the deltoid muscles could be made to touch each other. The condition thus approached that of the carnivora.

Mr. F. C. WALLIS showed a case of Hydrops Articuli in the Knee-joint of an old man who was the subject of well-marked Osteo-arthritis. The ligamentum patellæ had been ruptured; previously to that the patella had been twice fractured; it could now be felt some distance up the thigh. In spite of this condition the man was able to get about with the aid of a stick. The large fluid swelling in front of the joint had been aspirated three times and pressure had been applied. This had had no effect in reducing the fluid. The comparative ease with which the man got about with so disorganised a joint was no doubt helped by this fluid condition of the joint cavity.

Mr. WALLIS also showed a case of Acute Intussusception in a child, aged seven months (ileo-cæcal variety) successfully treated by operation. This patient was admitted to the Metropolitan Hospital on July 21st with somewhat obscure symptoms of intestinal obstruction. The operation was performed 33 hours after the first onset. An incision in the upper part of the right semilunar line was made and the abdomen was opened. The intussusception, which occupied the situation of the hepatic flexure of the colon, was drawn out of the incision and by gentle traction and pressure it was gradually reduced. The intussuscepted gut was seven inches long, quite collapsed, somewhat congested, and thickened. After reduction the intestine was returned to the abdomen and the abdominal incisions were closed by one row of silkworm-gut sutures. The operation lasted for 20 minutes. The bowels acted next day. Recovery was uninterrupted except that the infant was unable to digest any peptonised or other milk, but when the mother recommenced to feed the child this trouble ceased, and the little patient was discharged on August 8th quite well.—Mr. A. E. BARKER suggested that Mr. Wallis should describe the stages of the operation, for he considered it of great importance that only a small opening into the abdomen should be made and the gut manipulated with the first finger in the abdomen and the thumb on the abdominal wall.—Mr. WALLIS, in reply, said that in this case it had been impossible to reduce the intussusception within the abdomen and therefore it had to be brought out and it was then easily reduced. One of the most interesting features of the case was, however, the congestion which was present; this was so extreme that had he not on a previous occasion seen a similar condition in a child who made a good recovery he would have thought it hopeless to return the gut.

Mr. H. B. ROBINSON showed a case of Leontiasis Ossea, (? "Henpuye"). The patient, a man, aged 28 years, had very hard, almost symmetrical swellings on the nasal bones and adjacent parts of the superior maxilla; the skin was not involved. The nasal chambers were almost completely blocked, the turbinates being pushed towards the septum. The swelling first appeared on the left side in 1897 and progressed slowly. There was no pain and no watering of the eyes. There was no history of syphilis. He had been in South Africa since the lesions appeared. The remarkable feature of the case was its strong likeness to "henpuye" or "dog-nose" of Cape Coast Colony.—Mr. CHARTERS SYMONDS suggested that the masses should be removed by operation. He referred to a similar case of about from eight to 10 years' duration, in which he had made the usual incision for removal of the upper jaw and chiselled away the bone and opened into the post-nasal space. The patient made a good recovery and there was no recurrence. He mentioned another case in which improvement had taken place.—Mr. ANTHONY A. BOWLBY said that under the heading "Leontiasis Ossea" three somewhat distinct conditions were described—firstly, a condition in which many bones were affected; secondly, a condition limited to the upper jaw; and thirdly, a localised condition closely allied to the "henpuye" which was met with in South Africa.—Mr. C. R. KEETLEY said that he had seen a patient with a similar condition which was unilateral. This he had removed, with the result that the patient made a good recovery and had had no recurrence of the growth. In another case of a young girl he had also removed the bone by an incision within the mouth, and that patient also made a good recovery with no deformity.—Mr. ROBINSON, in reply, agreed with Mr. Bowlby with regard to the nomenclature of the disease, and considered that an operation was certainly advisable in this case.

Mr. CHARTERS SYMONDS showed a case of Pulsating Tumour of the Sacrum. The patient, a man, aged 65 years, went to Guy's Hospital complaining of pain in the sacrum. On rectal examination a pulsating tumour could be felt high up covering the whole width of the sacrum, and reaching rather further to the right. The pulsation could be controlled by compression of the aorta. Through the sacrum a loud systolic bruit could be heard. The patient had also outward displacement of the left eyeball due to a formation (growth?) in the inner side. From the nose he had a polypus removed a year or more ago. It was suggested that pulsating tumour was a growth secondary to that in the ethmoid.—Mr. CECIL LEAF asked if there was any relation between the polypus removed from the nose and the growth.—Mr. WALLIS asked about the duration of the condition and suggested the possibility of the condition being a nævoid one.—Mr. BARKER suggested that the patient should be examined with a speculum. He recalled a case in a man, aged 40 years, who had very extensive nævoid growth in the rectum. He had had one or two attacks of hæmorrhage as a child. He died from hæmorrhage from the rectum.—Mr. CHARTERS SYMONDS, in reply, said that the ocular condition had been present for nearly a year. There had been an error in saying that a polypus had been removed from the nose. There had been a suppurative condition and that had been treated. The rectal examination did not suggest a nævoid condition. He thought it most likely that the condition was either a pulsating sarcoma or an aneurysm.

Mr. CHARTERS SYMONDS also showed a case of Syphilitic Myositis of the Extensor Cruris. This patient was exhibited last session. He was again exhibited in fulfilment of a request made at that time. Doubt was expressed as to the nature of the case, some thinking the condition to be a new growth. In the interval rapid improvement had taken place, preceded by involvement of the skin. The patient was unable to submit to the treatment of rest and for a time was without medicinal treatment. When he returned there were effusion into the knee and signs of advancing disease, and the skin was broken in several places. Large doses of iodide produced rapid improvement, so that the diagnosis could no longer be doubtful.

Dr. H. E. SYMES THOMPSON showed a case of Arthropathy in a case of Bronchiectasis. The patient, a single woman, aged 26 years, first showed symptoms of chronic bronchitis about 18 months ago, the sputum being offensive from the first. Twelve months ago the sputum became more

offensive and more copious, and about this time the ankle-joints first became affected. Subsequently the wrists and knees were involved. Both wrists were swollen, stiff, and tender. The fingers were also somewhat swollen. There was much muscular atrophy. The knees were slightly swollen and contained a little fluid. The ankles were enlarged but were not tender. Physical signs of bronchiectasis were well marked at the left base. The sputum, which formerly was very offensive, had now no fœtid odour and the quantity had greatly diminished.—Mr. BOWLBY pointed out that the joint condition in these patients was almost certainly due to the septic infection from the cavities in the lung. He considered that these cases were closely allied to the rheumatoid arthritis which had been described in children.—Dr. SEYMOUR TAYLOR asked under what treatment the fœtid sputum had been improved.—Mr. WALLIS said that he had observed synovitis in a case of ulceration of the rectum and that as soon as the ulceration was cured the joints also recovered. He referred to the association of joint trouble with appendicitis, some cases having been recorded by Dr. H. D. Rolleston.—Mr. CHARTERS SYMONDS said that he had seen several cases of chronic suppuration and infection of joints and that as soon as the suppuration was cured the joint condition also cleared up.—Dr. SYMES THOMPSON said, in reply, that the treatment of the case had been by creasote and general measures. He thought that at present the balance of evidence was against operation in these cases; it had been tried, but on the whole with unfavourable results.

LIVERPOOL MEDICAL INSTITUTION.

Aneurysmal Varix of the Femoral Artery and Vein.—The Personal Factor in Tuberculosis.

THE first ordinary meeting of the session of this society was held on Oct. 24th, Mr. EDGAR A. BROWNE, the President, being in the chair.

Dr. R. C. DUN showed a patient suffering from Aneurysmal Varix of the Femoral Artery and Vein in the Upper Part of Scarpa's Triangle on the left side resulting from a Mauser bullet-wound. Very severe hæmorrhage had immediately followed the receipt of the injury. The communication between the artery and vein had apparently developed on the third day after the wound was inflicted, as indicated by the supervention of pulsation and thrill over the vessels. For the past year the patient had been doing full work as a tailor, suffering comparatively little inconvenience. There was no distinct tumour in Scarpa's triangle, merely an ill-defined swelling. Expansive pulsation and marked thrill were present, with a very loud rumbling bruit resembling the noise heard when travelling in a train passing through a tunnel. There was no œdema of the limb below or varicosity of veins. The pulsation and thrill gave no inconvenience to the patient after long standing or walking and the limb was readily tired. It was not considered advisable to attempt any operative interference.—Mr. RUSHTON PARKER referred to a formidable case of the kind operated on by Professor Lister in Edinburgh over 20 years ago. The femoral artery was tied above and below the aperture and the much dilated vein was stitched up with antiseptic catgut and its channel was preserved. Though much blood was lost in a prolonged operation the patient recovered with a useful limb.—Mr. GEORGE HAMILTON mentioned several cases of Ring Stricture of the Sigmoid Flexure which he had previously brought before the society and in which the patients were still alive and well. Stress was laid first on the fact that carcinoma of the intestine was not nearly such a malignant disease as carcinoma elsewhere; and secondly, that an operation for removal was best conducted in two stages, no attempt being made to unite the divided bowel at the primary operation. A very unusual case was related of a man who was 68 years of age and who suffered from a carcinoma of the sigmoid flexure which had become (owing to a long mesocolon) attached to about the middle of the transverse colon. In order to remove this growth it was found necessary to take away 16 inches of large bowel. The man had made an admirable recovery. Mr. Hamilton made some further remarks on the advisability of recognising these ring strictures before much intestinal obstruction occurred.—Mr. RUSHTON PARKER agreed with Mr. Hamilton that in a case of this kind it was the best practice to tie tubes in the cut ends of the gut and bring them out of the wound, reserving to a future operation any attempt that might be made to re-unite the gut.

Sir DYCE DUCKWORTH read a paper on the Personal Factor in Tuberculosis.[1] He pointed out how at the present time the whole art of medicine, and in particular the science of pathology, was dominated by bacteriological ideas. Amidst the enthusiasm with which these momentous discoveries in this field had been received he could not but feel that some important although older doctrines had been lost sight of. The doctrine of the diatheses received little or no attention in these days, but bacteriology had not done away with these textural conditions, although it had temporarily overshadowed the recognition of them. The modern doctrine was laid down that "scrofula was tuberculosis." This Sir Dyce Duckworth absolutely denied, and he maintained that it was possible to be scrofulous throughout life without becoming tuberculous. The essential character of scrofula was a textural vulnerability to irritation of all kinds, and especially to tuberculous invasion. A protest was made against the modern idea of "curing" tuberculosis. All they could do was to place the patient in conditions favourable to an arrest of the process. No malady was so often arrested as tuberculosis, but none was more ready to relapse at any period within the lifetime of the patient. A better comprehension of the textural proclivities of the individual might enable them to frame a sounder prognosis in respect of liability to relapse after the occurrence of an arrest. More than this they could not do. In any case, bacteriology was not the "be all" and "end all" of clinical medicine, as it was so commonly supposed to be.—Dr. T. R. GLYNN considered that Sir Dyce Duckworth's remarks on the importance of recognising the part played by the constitution of the host in the development of tuberculosis were fully warranted owing to the attitude of certain physicians at the present time. He had the opportunity of seeing a number of medical reports on the health of applicants for insurance and had noted that some medical examiners in cases where there was a history of phthisis in a family made such remarks as this: "Some of the relatives have died from tuberculosis, but this affection is no longer considered hereditary, and it is not necessary to charge an extra." The pathologist, in his inoculation experiments, studied only one aspect in the etiology of tuberculosis, but he could not understand how the physician could fail to recognise the importance of the other aspect—predisposition, hereditary or acquired. He thought that, for the most part, what was formerly known as the strumous diathesis would now be recognised as degeneracy.—Dr. WILLIAM CARTER agreed that it was as necessary to consider the soil as the seed, but he believed that most, if not all, medical men took this view. Facts bearing on the importance of the nature of the soil were too patent to be mistaken, such, for example, as tuberculosis ceasing after small-pox, &c., the different order in which structures were attacked in the young as compared with the aged, the greater degree of susceptibility of the coloured races, &c. In every case it seemed to be a struggle between destructive and defensive forces, for the probability was that there was no absolute immunity in any individual of any race. It seemed probable, also, that the bacillus tuberculosis could grow on different media and produce different toxins accordingly. The importance not only of diathesis but of what was termed "temperament" was wisely recognised by their forefathers, and a rough but practically useful classification into sanguineous, nervous, lymphatic, &c., persons, the reaction of whose tissues both to disease and remedies was the outcome of their observations. In this kind of knowledge they had probably declined. Cures in an absolute sense must be very rare. A curious fact was, perhaps, worth mentioning as bearing on the supposed reliance placed by the professional mind in bacilli destroyers as against soil modifiers—viz., that though Koch's demonstration of the cause of tuberculosis was made in 1881 there was scarcely a single important addition made to the official anti-microbic drugs since the Pharmacopœia of 1867, which looked as though the professional judgment of the nation relied more on supporting the patient against the attack of the bacillus than on directly destroying the bacillus after its invasion of the organism.—Dr. W. B. WARRINGTON recognised the greater vulnerability of some to tuberculous disease arising either from inherited defects or acquired conditions of lowered vitality.

[1] We propose to publish this paper in full in an early issue of THE LANCET.

He considered, however, that it must be a very difficult task to point out such specific features in individual physiognomy as would enable an observer to state with reasonable probability the individuals who were the more liable to tuberculosis. Similarly he considered that it would be difficult to predict of several individuals, previously healthy and whose family history was unknown, which individual was on exposure to cold and fatigue most liable to rheumatic fever. The pneumonia bacillus inhabiting the mouth of a healthy person might be as virulent as that found in one suffering from the disease. There must, therefore, have been some change in the host, but this change could not be recognised. The statement he would emphasise was that the proof of a diathesis was often the proof of a disease.—Dr. THOMAS HARRIS (Manchester) scarcely thought that the modern pathologist so completely ignored the personal equation of the suitability of soil in favouring or retarding the development of tuberculosis as Sir Dyce Duckworth inferred. There could be no reasonable doubt that the suitability or otherwise of the soil not only affected the tendency to the development of tuberculous foci in the first instance but also played a great part in the subsequent progress of such foci. The favourable results following the modern treatment of tuberculosis in open-air sanatoria were doubtless due to the rendering of the human organism a less suitable soil for the progress of the lesion and resulted in many cases in an arrest of the disease. It was quite right to use the term "arrest" in reference to such cases and to avoid the term "cured."—Dr. R. J. M. BUCHANAN and Dr. J. BARR also spoke, and Sir DYCE DUCKWORTH replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—The opening meeting of the session of this society was held on Oct. 18th, Dr. A. G. Barrs, the President, being in the chair.—The President delivered an opening address on Some Points in Medical Practice.—Dr. Christy Wilson (Doncaster) read a short paper on the Montana Sanatorium in the Rhone Valley, showing in the first place lime-light pictures of Nordrach-upon-Mendip and Altadore, in County Wicklow. Montana, near Sierre, was chosen as the site of a large sanatorium by a number of the leading physicians in Switzerland and the entire control was placed in the hands of Dr. Stephani. The altitude (5000 feet), the small rainfall, the great amount of sunshine, the almost total absence of fogs, the complete shelter from the north and east by mountain ridges covered with an immense pine forest, the spacious verandahs, the generous diet, the lakes for figure-skating, the lovely walks in the park and the forest, all combined to give the unfortunate victims of tuberculosis an excellent prospect of cure. Disinfection of the rooms by scrubbing with sublimate and by formaldehyde vapour under high pressure was carried out rigorously. The hope was expressed that ere long every case of pulmonary tuberculosis would be notified and isolated in a sanatorium.—The President made some observations upon the subject.—Mr. Secker Walker read a paper on the Advantages of the Complete Operation as devised by Mr. Ballance for Mastoid Disease and Chronic Otorrhœa over the Older Methods. The operation was described in detail. Its special advantages were given as follows. The whole seat of the disease in the cavities of the temporal bone was exposed to clear view and the disease could be entirely removed. By the free cutting away of bone and the amount of room thus secured it was not difficult to keep away from what might be termed dangerous areas, or they might be better approached with caution. At the end of a fortnight the freshly-cut surface of the bone, now vascularised, was covered with a large epithelial graft which lined the whole cavity and by immediate healing prevented the recurrence of the disease. The period of treatment was much less, from four to six weeks, instead of as many months. The results of the older methods were so uncertain that surgeons hesitated to advise operation for chronic otorrhœa and only operated for obvious mastoid disease. With this operation it was possible to speak with something approaching certainty of success, while the results on the power of hearing were distinctly good.—Dr. A. L. WHITEHEAD had performed the operation according to Ballance's method a number of times and he thoroughly agreed with Mr. Walker as to the great advantages presented by this method over all others. He preferred to use the chisel to enter the antrum and the burr to enlarge the cavity and to smooth the walls. The importance of securing a healthy condition of the naso-pharynx was mentioned so as to prevent reinfection through the Eustachian tube. The practical certainty of effecting a cure by this operation was so great that no case of chronic otorrhœa should be allowed to go on uncured.—Mr. E. Ward and Dr. James Kerr also took part in the discussion and Mr. Walker replied.—The following cases, pathological specimens, &c., were shown. Dr. J. B. Hellier: (1) A Uterus Extirpated for Intractable Procidentia; (2) a Double Hydro-salpinx; (3) (with Mr. R. Smailes) a Dermoid Ovarian Cyst removed in the Fifth Month of Pregnancy; and (4) (with Mr. B. Wainman) Ruptured Tubal Gestation treated by Abdominal Section.—Mr. H. Littlewood: (1) Three Specimens of Ectopic Gestation; (2) Loose Cartilage removed from the Elbow-joint; and (3) an Implantation Cyst from the Finger.—Dr. A. G. Barrs: (1) Specimens from a case of Hodgkin's Disease; and (2) a case of Hysteria in the Male.—Mr. B. G. A. Moynihan: (1) A series of specimens from Operations for Recurrent Appendicitis; (2) a Vermiform Appendix transfixed by a pin which had been swallowed 14 days before operation; (3) a Part of the Ileum, the Cæcum, the Ascending Colon, and a Portion of the Transverse Colon removed for Carcinoma; (4) the Sigmoid Flexure removed for Chronic Recurring Volvulus; (5) Malignant Stricture excised from the Sigmoid; and (6) specimens from cases of Excision of the Rectum by Kraske's method.—Dr. T. Churton: Two cases of Nervous Disease (Myoclonus and Disseminated Sclerosis) treated by Subcutaneous Injection of Curare.—Dr. Whitehead: A specimen of Rhinolith; and (2) a case of Microtia.—Mr. Mayo Robson: (1) Multiple Tuberculous Constrictions in the Small Intestine, Enterectomy for Intestinal Obstruction; (2) Almost Complete Gastrectomy, recovery; and (3) Two Partial Gastrectomies, recovery.—Dr. C. M. Chadwick: A case of Rheumatoid Arthritis in a Child.—Mr. Lawford Knaggs: Ectopic Gestation.—Dr. E. F. Trevelyan: A Part of a Brain showing Multiple Gummata.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—The first meeting of the session of this society was held at the Guildhall, Windsor, on Oct. 23rd, the President, Mr. W. B. Holderness, J.P., being in the chair.—Seven microscopical preparations illustrating the Minute Anatomy of the Appendix under Healthy and Pathological Conditions were exhibited, as well as two wet specimens showing the naked-eye appearances of the same, the whole being lent by Dr. G. Leslie Eastes of the Laboratory of Clinical Pathology, Queen Anne-street, W.—Dr. W. F. Lloyd showed a specimen of a Cæcum and Ruptured Appendix from a case of perforating appendicitis in a boy, aged 10 years.—Mr. Noble Smith showed some excellent Photographs illustrating the effect of treatment upon various deformities, e.g., wry-neck, spinal curvature, &c.—Dr. E. S. Norris exhibited a patient suffering from Multiple Growths, presumably sarcomatous in nature. There were great protrusion of the eyeballs and almost total blindness.—Dr. Lloyd showed a boy suffering from Enlarged Glands and Anæmia. The case had improved greatly under arsenic, and a blood-film was shown which indicated that the condition was not caused by Hodgkin's disease.—Dr. G. E. Hale showed: (1) A well-marked case of Fibroid Phthisis affecting mainly the right side in which the heart was drawn considerably over to the right; and (2) a young woman with a Tumour in the Right Lumbar Region of the Abdomen. It was thought to be a cyst of the right kidney.—Mr. A. Marmaduke Sheild read a paper entitled, "When to Operate in Appendicitis." The paper commenced by quoting certain varieties of the disease where operative methods seemed the sole hope, these being fulminating or gangrenous appendicitis and perforative appendicitis with general septic peritonitis. Stress was laid on the deceptive and dangerous nature of these cases and on the great importance of their early recognition. Appendicitis with local inflammatory mischief was next touched upon and here Mr. Sheild said that the rules of practice were not so clear. The considerations for surgical and medical treatment in these cases were mentioned and conclusions were drawn. The formation of abscess always calling for incision the indications of pus formation were pointed out. Under so-called recurrent appendicitis the medical and surgical aspects of the disease were noticed. The paper specially dealt with these cases as met with in private practice, the difficulties of the medical attendant in the question of morphia administration and the attitude of friends and relatives being entered into. Treatment, owing to time, could not be more than touched upon, but a method devised

by Mr. Sheild of introducing saline purgatives into the large intestine was described.—A discussion followed in which Dr. Norris (Eton), Mr. Arnold Thomson (Maidenhead), Dr. Francis Hawkins (Reading), Mr. R. S. Charsley (Slough), Mr. Noble Smith (London), and Mr. E. W. Adams (Slough) took part, and Mr. Sheild having replied the proceedings terminated with a vote of thanks to Mr. Sheild for his very lucid and instructive address.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held at the Hospital for Sick Children, Great Ormond-street, W.C., on Oct. 18th, Dr. D. B. Lees being in the chair.—Dr. Fennell showed, for Dr. Garrod, a case of Cerebral Diplegia. Ataxy was associated with spasticity, a fact which was considered to suggest that not only the cerebrum but the cerebellum also was affected. Retinitis pigmentosa was present, a point of interest in connexion with the etiology of cerebral diplegia and the suggestion of its connexion with syphilis.—Dr. Poynton, Dr. Hawthorne, and Mr. Carre-Smith commented upon the case, and Mr. G. Pernet remarked that De Amicis of Rio de Janeiro had placed upon record several cases in which there was undoubted syphilis in one or both parents of children with retinitis pigmentosa.—Mr. H. S. Collier showed an infant, aged three months, the subject of Congenital Deformity of the Left Shoulder Girdle and Spine of the type described by Willett and Walsham.—Dr. Lees showed a case of Enlargement of the Heart the result of Rheumatism. Thrombosis of the right brachial and jugular veins had been present.—Dr. Lees also showed a case of Arsenical Neuritis caused by Liquor Arsenicalis used in the treatment of chorea. A dose of 15 minims had been given by a medical man for five weeks.—Dr. Hawthorne and Dr. W. C. Chaffey spoke upon the case.—Dr. Hutchison showed a case of Double Facial Paralysis following Ear Disease which had quickly recovered after both mastoids had been operated upon.—Dr. Lees and Dr. Sansom commented upon the case.—Dr. Theodore Fisher showed a Heart from a child, aged 15 months, in which the mitral orifice was extremely stenosed. Marked symptoms pointing to disease of the heart had been present from the time of birth. A heart was also shown from a child, aged four and a half months, in which the segments of the aortic valve were much thickened and adherent to one another. In the first case no history of rheumatism could be obtained in the mother, but in the second about three months before the birth of the child there had been pain and swelling of the left knee.—Dr. Sansom remarked upon the fact that such cases were not malformations in the strict sense of the word but the consequences of intra-uterine endocarditis.—Dr. Chaffey read a paper on a case of Enlarged Spleen associated with the Blood Changes of Pernicious Anæmia. He thought the case was one of pseudo-leukæmia which had terminated with destructive blood-changes.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—The inaugural meeting of the present session of this society was held on Oct. 15th, Dr. R. Honeyburne, the President, being in the chair.—Cases, Pathological Specimens, Photographs, and Surgical Instruments were shown by Dr. Arnold Evans, Dr. A. Bronner, Mr. J. B. Hall, Dr. James Kerr, and Mr. William Horrocks.—The President read a paper on the Diagnosis and Treatment of Diphtheria. He justified the choice of this disease as the subject of an inaugural address because they knew its cause and symptoms, the manner of their production, and its cure and prophylaxis. Further, it appeared from various health reports that the disease, which was rare in the West Riding cities until recent years, appeared to be on the increase and had assumed alarming proportions in Leeds and Sheffield. The death-rate in Britain from diphtheria compared very favourably with that obtaining in continental and American cities. The Klebs-Löffler bacillus fulfilled the three conditions necessary to prove that it was the *causa causans* of diphtheria: (1) it was universally present in diphtheritic membrane; (2) it could be cultivated outside the body and inoculation of the pure culture into cats caused symptoms identical with those of the disease in man; and (3) accidental inoculation of human beings with the pure culture had occurred and the disease had been produced in a virulent form. Nothing was known regarding the life-history of the bacillus outside the body (if it had such a separate existence). The only domestic animal naturally susceptible was the cat, and instances of infection from that source were not common; so that the only known factors relating to the spread of the disease were the age of the patient and the season of the year. Improved sanitary conditions which had done so much to mitigate enteric fever had had no effect on diphtheria, which had increased rather than diminished both in range and virulence during the last 20 or 30 years. It was probable that the infection was often conveyed by apparently healthy persons who yet harboured virulent bacilli in their mucous membranes. The cardinal rules of treatment were: (1) inject antitoxin serum early; and (2) inject an efficient dose. The use of antitoxin as a prophylactic was only of very limited application, but might be used, perhaps, with advantage in schools to prevent the immediate spread of an outbreak, as it would confer immunity for something like three weeks.—The paper was followed by a discussion in which several members took part.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Oct. 25th when a Presidential Address was delivered by Mr. A. Wynter Blyth on Ventilation, the substance of which will be found at p. 1180.—In the discussion which at Mr. Wynter Blyth's express desire followed the address Dr. Gwynn made some remarks on the defective ventilation of places of worship.—Dr. McVail expressed his conviction that Professor De Chaumont's standard—2 parts per 10,000 of organic CO_2, or 6 parts in all—was fixed too high, since the outer air in towns frequently contained that amount, and it was obviously impossible to have a purer air in any occupied room. When the apartments and its occupants were clean he was certain that four parts of organic CO_2 might be present without any perceptible odour or closeness. He had found it so in a fever ward which he considered overcrowded with cases of enteric fever and feared that progress would be hindered by efforts at the unattainable.—Dr. T. Glover Lyon said that though the cost of working his system was small, that of its installation was unavoidably considerable and often deterred hotel proprietors and others from adopting it. Owners and architects objected to the size of the fans and shafts, but while a six-foot fan making 500 revolutions per minute would be efficient and noiseless, one of two or three feet diameter revolving 1000 times would produce an intolerable noise with little effect save in its immediate proximity.—Dr. Kenwood doubted the expediency of forcing air into sewers, maintaining that their ventilation should be effected by powerful extraction only.—Dr. E. F. Willoughby, referring to Mr. Blyth's deprecation of all attempts at the ventilation of public buildings by other than fans, described the system adopted by Professor G. Fischer in the Memorial Church at Berlin where, by tiers of "heitzkörper," or steam-coils, increasing in number to the summit of the dome, the foul air, instead of being chilled and sinking again, as in all similar edifices, passed out at the lantern in a continuous stream. Judging by the fact that at all seasons and under all circumstances a uniform temperature of 60° F. was maintained it would appear to be a complete success.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—At a meeting of this society on Oct. 23rd, Dr. A. J. Harrison, the President, being in the chair, the following cases were shown. Dr. P. S. Abraham: (1) A case of General Progressive Scleroderma in a married woman, aged 49 years (in the discussion which followed Mr. Campbell Williams spoke of an allied case in a diver, Dr. Alfred Eddowes of cases of leukodermic alopecia, and Dr. J. H. Stowers of the case which he showed at the Dermatological Congress in 1881, in which the distal phalanges of the hands were entirely absorbed, the last speaker regarding the prognosis in these cases as being grave; Dr. Abraham, however, said that there were several cases of recovery on record); (2) Xanthoma Diabeticorum in a woman, aged 32 years (attention was called to the rareness of this condition in women and Dr. Wilfrid Warde gave a microscopical demonstration of the histology of the papules); (3) Lupus Erythematosus in a girl, aged nine years; and (4) Dermatitis Herpetiformis in a young girl (Dr. Wilfrid Warde suggested that this was a case of pemphigus foliaceus).—Dr. Stowers: A case of Paget's Disease of the Left Breast of 15 Years' Duration in a patient, 82 years of age. He called particular attention to the long duration of the disease without any glandular implication or scirrhus formation.—Dr. G. Norman Meachen: (1) A case of Lichen Planus Hypertrophicus in a Woman; and (2) a case of Lymphangioma Circumscriptum in the Left Axilla of a Woman (Mr. G. Pernet thought this to be a case of white

mole; there was a history of some, probably nævoid, growth having been removed from this region many years ago).—Dr. Graham Little: (1) Lichen Scrofulosorum in a Girl; and (2) Two Children with Parasitic Alopecia.—Dr. Eddowes: A case of Lupus Vulgaris.—Mr. Arthur Shillitoe: (1) Tertiary Syphilitic Indurative Œdema of the Scrotum, Lip, and Tongue; and (2) Secondary Syphilitic Tongue, showing Papillomata and Condylomata present at the same time.—The proceedings terminated with an address from the President on the Accident of Disease Dermatologically Considered.

SOUTHPORT MEDICAL SOCIETY.—The annual meeting of this society was held on Oct. 9th at the Temperance Institute, Dr. R. Harris being in the chair. The annual report and balance-sheet were duly adopted and the following officers were elected for the ensuing session:—President: Dr. C. Pinkerton. President-elect: Dr. F. J. Baildon. Vice-President: Dr. J. C. Russel. Committee: Mr. G. Reinhardt Anderson, Dr. P. Ashworth, Mr. A. H. Baines, Dr. W. H. Barrett, Dr. Harris, and Dr. G. C. Walker, sen. Honorary treasurer: Dr. Mewburn Brown. Honorary secretary: Mr. R. M. Littler.—Dr. Pinkerton then gave an inaugural address on Moveable Kidney. He dealt exhaustively with the causes, symptoms, complications, diagnosis, and treatment of this affection and laid special stress upon the frequency of obscure and intractable gastro-intestinal symptoms. Numerous illustrative cases were quoted.

Reviews and Notices of Books.

A Text-book of Gynæcology. Edited by CHARLES A. L. REED, A.M., M.D. Illustrated by R. J. HOPKINS. With 355 Illustrations. London: Henry Kimpton. 1901. Pp. 950, 8vo. Price 25*s.* net.

THIS text-book of gynæcology is the outcome of the coöperation of some 31 different writers. The method has been followed of obtaining contributions upon special subjects, such as pathology and dermatology, from various authorities who are not strictly gynæcologists. As a result of the manner in which the book has been compiled a single chapter is in some instances based upon contributions from several writers, while the whole has been rendered consecutive, systematic, and homogeneous by the editor. This system has worked very well mainly owing to the care and supervision exercised by Dr. Reed. Here and there, as is inevitable in such a book, we find somewhat contradictory statements as, for example, in the chapter upon the Pelvic Floor and its Injuries with regard to the functions of the perineum, but such inconsistencies are few and far between. The general tendency of the work is surgical; this is well illustrated by the treatment recommended for uterine displacements, and by the section on the treatment of acute septic infections of the uterus in which we find curettage and hysterectomy alone advocated. The local medicinal treatment of the affections of the external genitalia, admirably described by Ravogli, is, however, fully considered. In the descriptions of maldevelopment of various portions of the genital tract the editor has availed himself of the services of Ballantyne, and the result is seen in several sections of much interest. Amongst other British contributors are Sinclair who writes upon Bacteria of the Uterus, Ovaries, and Fallopian Tubes, Mayo Robson who has contributed an article upon Recto-vaginal Fistula, and Murdoch Cameron who describes Cæsarean Section. In mentioning more particularly the work of these contributors we must not be thought unmindful of the very valuable portions of the book written by the remainder of the collaborators, representing, as they do, the best American teaching of the present day. General Pathology has been placed in the hands of Herzog and the result is a series of descriptions of much greater value than are usually to be found in text-books of gynæcology. Where there is so much that is good it is difficult to select particular chapters, but we may call attention more especially to the description of Tuberculosis of the different portions of the Genital Tract by Whitacre, to the chapters mainly written by the editor himself, and to those upon the Urinary Apparatus by Harris and that upon the Rectum by Gant, the latter containing a valuable section upon Examination of the Bowel by Martin. A very suggestive chapter upon Pelvic Diseases and Nervous Affections by Dercum concludes the volume. We cannot agree with Dr. Reed when he states that Byrne is wrong in calling his operation of electro-hysterectomy a high amputation of the cervix. An almost precisely similar operation was performed with the scissors or knife by many of the adherents of supra-vaginal amputation of the cervix before the days of the electric cautery, and if the editor refers to Sir John Williams's book on "Cancer of the Uterus" he will see that it was his custom in performing this operation to remove almost the whole, and in many cases the whole, of the mucous membrane of the body of the uterus, without, however, including so much of the muscular tissue as Byrne does. This operation of electro-hysterectomy is undoubtedly a development of the operation of high amputation of the cervix, and the brilliant results obtained by its originator go far to confirm the views of those who still think that supra-vaginal amputation of the cervix, if properly performed, is likely to give good results in selected cases.

The chapters upon the Affections of the Fallopian Tubes, to which Clark and Coe have contributed as well as some of the writers already alluded to, are particularly good and worthy of perusal. Neoplasms of the ovaries receive full treatment by Rothrock, but in the chapter upon Ectopic Gestation there are several notable omissions. The illustrations are good and well reproduced. The editor has adopted the uncommon plan of describing them by quotations from the text. This answers well in some cases, but in others the description has little or no bearing upon the illustration, and does not in the least help to explain it or to call attention to the particular point it is intended to represent. There are some evidences of haste, and the references, almost uniformly incomplete, might well have been omitted. A full index is provided. On the whole the book is good and up to date and may be recommended to those who have already some knowledge of the subject.

A Manual of Surgery for Students and Practitioners. By WILLIAM ROSE, M.B., B.S. Lond., F.R.C.S. Eng., Professor of Clinical Surgery in King's College, London, and Senior Surgeon to King's College Hospital; and ALBERT CARLESS, M.S. Lond., F.R.C.S. Eng., Surgeon to King's College Hospital, and Teacher of Operative Surgery in King's College, London. Fourth Edition. London: Baillière, Tindall, and Cox. 1901. 8vo, pp. 1182. 406 Illustrations. Price 21*s.*

WHEN four editions of a book are published within a space of under two years it is obvious that there is a demand for such a book, and we can do but little here except congratulate Mr. Rose and Mr. Carless upon the success of their work. In reviewing the second edition we expressed a hope that the book would not be allowed to get any larger. That edition consisted of 1190 pages, while this, the fourth, consists of 1182 pages. The authors state in their preface that the present edition is practically a reprint of the preceding one, and scarcely a year has elapsed since the third edition appeared. We consider this work to be eminently suitable as a student's text-book because in the main the descriptions are clear and yet concise, so that practically all that a student need know of the vast science of surgery is contained within 1200 pages. It is difficult to see where the work could have been made briefer without a sacrifice of efficiency. The excellent skiagrams of fractures and dislocations should prove of great value to the reader,

but we would suggest that some of the diagrams might with benefit be replaced by more artistic productions. We may instance *Fig.* 180, which is quite unworthy of such an excellent text-book as the one before us.

Encyclopædia Medica. Under the general editorship of CHALMERS WATSON, M.B., M.R.C.P. Edin. Vol. VII. Edinburgh: William Green and Sons. 1901. Pp. 506. Price 20*s.*

THIS volume carries on the work from an article under the heading "Liver" to one under that of "Menopause." Many contributions of considerable interest and value will be found. The physiology and general medical affections of the liver were considered in the previous volume; in the section now before us we find a description of those conditions generally known as "tropical" and of parasitic affections of the liver. The author is Mr. James Cantlie. His remarks on hepatic abscess are particularly worthy of note. In common with most authorities on tropical diseases he considers that there is but little evidence to justify the belief that malarial poisoning has any direct influence in causing abscess of the liver. Although in many instances the two factors co-exist, yet they are by no means coterminous in their geographical distribution; moreover, the changes induced by malaria in the viscera generally are more in the nature of a cirrhotic or plastic nature than of a destructive or retrograde character. Mr. Cantlie further is of opinion that malaria serves merely to weaken the functional powers of the liver and thereby to render it more susceptible to disease and less fit to resist the influences brought about by chill.

Dr. J. F. Sutherland, deputy commissioner in lunacy for Scotland, writes an interesting article on Lunacy, dealing mainly with the legal aspect of the subject. This contribution should be a valuable one for reference, as it contains in a small space all the necessary information as regards the legal status of a medical man who undertakes the charge of insane patients.

Diseases of the lungs are considered in the following sections—Pulmonary Tuberculosis, Fibrosis, and Pneumonokoniosis, by Dr. R. W. Philip; Gangrene of the Lungs and Emphysema, by Dr. S. H. Habershon; and Vascular Disorders, Syphilis, Abscess, and Parasitic Affections of the Lungs, by Dr. R. A. Fleming. All these articles are worthy of high praise and their authors have evidently spared no pains to render them as complete and up to date as possible. Dr. Philip's remarks on prognosis are interesting. He rightly lays stress on the caution which should be exercised in judging of the progress of the disease by the gain in weight. We think this caution most necessary. It is a matter of frequent occurrence that patients under the "hygienic" or "open-air" treatment gain weight considerably, whilst the temperature curve and physical signs show but little alteration. The patients are likely to lay too much importance on the gain in weight and therefore to wish to leave the institution sooner than is advisable. A gain in weight is certainly encouraging but is apt to be fallacious.

The article on Malaria is an excellent one and is by Mr. D. C. Rees. The section Parasitology, which describes the human and mosquito cycles of the malarial parasite, is particularly worthy of note and gives a good summary of the present knowledge on the subject.

There is an excellent article on Malingering, written by Mr. T. D. Patmore, late medical officer, His Majesty's prison, Wormwood Scrubs. In having to distinguish between true disease, hysterical phenomena, and symptoms purposely feigned for some ulterior object the practitioner is not unfrequently placed in a position of great responsibility and the greatest care and tact are required in examining a case and arriving at a conclusion. This difficulty has been added to in recent years by the custom of cloaking under the term "neurasthenia" many cases of voluntary imposture, and whilst the vagaries and erratic action which an exhausted, or concussed, or shocked nervous system may indulge in must be appreciated, yet we agree with Mr. Patmore that it is to be noted with regret that there is a tendency to confuse nervous with voluntary phenomena. Mr. Patmore in his experience at Wormwood Scrubs prison was frequently brought into contact with malingerers, and his remarks, therefore, will carry considerable weight and make his contribution a valuable one.

Mr. H. J. Stiles is responsible for the section on Diseases of the Mammary Gland. He has made a very complete study of his subject, the section on Neoplasms of the Mamma being particularly well arranged. Amongst the other contributors to this volume are Dr. H. Harvey Littlejohn who writes on Forensic Medicine, and gives a good epitome of the principles of that branch of medical science; Dr. G. F. Still who writes on Tuberculous Meningitis and Posterior Basic Meningitis; Dr. W. Osler whose article on Epidemic Cerebro-spinal Meningitis is particularly worthy of note; and Mrs. Garrett Anderson who contributes a short article on the Menopause.

JOURNALS AND MAGAZINES.

The Practitioner.—This journal is still engaged upon its Fracture Numbers, the October issue being the third of the series. Considering the importance of the subject of fractures to medical men generally, the wide space allotted need not be grudged. Few cases are so injurious to a medical reputation as those of a fracture with permanent, perhaps avoidable, deformity. Moreover, for a comparatively simple and obvious disorder, and one which has had close attention for centuries, fractures have assumed a new aspect and have received novel and entirely different methods of treatment within quite recent years beyond almost any other large class of surgical cases. Mr. H. L. Barnard contributes an exhaustive communication upon Fractures of the Lower Extremity. Separation of the lower epiphysis of the femur is especially dealt with and some most interesting examples are given of boys who have entangled their limbs in a cart-wheel while hanging on behind. *Apropos* of fractured patellæ Mr. Barnard digresses into the question of irrigating the knee-joint and shows how commonly the posterior pouches of the synovial membrane are neglected, separate incisions being necessary if these are to be thoroughly drained. Two striking reproductions of skiagrams represent respectively fracture of all the metatarsal bones and separation of the heads of the five outer metatarsals. Mr. F. C. Wallis illustrates his remarks on the Treatment of Paralysis and Muscular Atrophy after prolonged use of Splints or of an Esmarch's Cord by an unusual case of double congenital absence of the superior radio-ulnar articulations. Elaborate operative and electrical treatment secured a very gratifying result. A paper on Gastric Flatulence by Lydia Leney contains the statement, as the result of about 30 observations, that the volatile acidity of the contents of the stomach varies inversely as the presence of free hydrochloric acid. The editorial paragraphs touch upon the question of the reorganisation of the Royal Army Medical Corps and upon medical bulletins, *apropos* of which Sir Henry Halford's opinion is quoted. Mr. James Berry's excellent work on the Thyroid Gland is reviewed at length and the "Causerie" deals with the late Dr. McNeill Whistler.

The Journal of Hygiene. Vol. I., No. 4. October, 1901. Cambridge: University Press. Pp. 99. Price 5*s.* net.—Malaria forms the subject of two papers in the current quarterly number. Captain Leonard Rogers, I.M.S., discusses in interesting fashion the Seasonal Prevalence of Anopheles and Malaria in Lower Bengal and the

practical application of the mosquito theory; whilst Dr. Nuttall and Mr. Arthur Shipley continue their studies in relation to malaria, the structure and biology of anopheles being here dealt with in considerable detail. There are, too, some excellent plates, one of which shows the anopheles maculipennis in the act of sucking blood. Captain Rogers finds that the conditions which obtain in Lower Bengal, whether in the rural districts or the small towns, are such as to render the destruction of the larvæ impracticable. The houses are largely constructed on raised earth platforms which are formed by the excavation of earth from the adjoining low-lying soil and the tanks thus produced can neither be drained nor treated with culicides. These tanks, Captain Rogers finds, form a most important breeding-ground for anopheles. The larvæ are, according to these observations, most prevalent in hot weather, while during the rains they diminish in number. Captain Rogers does not find that the presence of fish is fatal to the existence of the larvæ. Although he does not regard it as practicable entirely to destroy the larvæ he thinks that much may be done in the neighbourhood of towns by filling up the pools, by lining the surface-drains, and by abolishing rice-fields. There is much interesting matter in this paper. Dr. J. S. Fulton gives an account of a Milk-borne Outburst of Enteric Fever in America, while Dr. R. H. Makgill and Dr. W. G. Savage contribute papers on the Value of the Neutral-red Reaction in the Bacteriological Examination of Water. The number concludes with some further observations by Dr. Louis Cobbett on the recent Outbreak of Diphtheria in Cambridge, which was dealt with on commendably modern lines. Dr. Cobbett discusses the very difficult question as to the possibility of isolating persons who are harbouring in their throats the bacillus of diphtheria but who present no other indications of that disease. He concludes (and we incline to the same view) that it would be extremely inexpedient to press the isolation of such cases—inexpedient in the best interests of public health. To invite opposition is obviously undesirable, more especially when it can clearly not be said that a person in whose throat the bacillus is found is suffering from the disease diphtheria. Probably the application of an antiseptic throat-wash would be found a more practicable measure than enforced isolation.

Analytical Records
FROM
THE LANCET LABORATORY.

CONDENSED EGG.

(THE CONDENSED EGG SYNDICATE, LIMITED, 19, GOULTON ROAD, HACKNEY, LONDON, N.E.)

THERE is no mystery about these preparations; they consist simply of fresh eggs and refined sugar. In appearance the preparations are not unlike malt extracts—slightly opalescent and syrupy. We examined and submitted to analysis three preparations, the first containing the egg-albumen, the second the egg-yolk, and the third the entire egg. The egg-albumen preparation gave on analysis the following results: moisture, 31·65 per cent.; mineral matter, 0·81 per cent.; proteids, 10·87 per cent.; fat, 0·30 per cent.; and sugar, 56·37 per cent. The egg-yolk preparation gave the following results: moisture, 24·80 per cent.; mineral matter, 1·24 per cent.; proteids, 11·68 per cent.; fat, 22·00 per cent.; and sugar, 40·28 per cent. Lastly, the entire egg preparation gave the following results: moisture, 28·70 per cent.; mineral matter, 0·92 per cent.; proteids, 11·75 per cent.; fat, 9·20 per cent.; and sugar, 49·43 per cent. These results are in perfect accordance with the descriptions of the respective preparations. Thus the egg-albumen preparation contains the most moisture but only a trace of fat. The egg-yolk preparation contains the least amount of moisture but a very large proportion of fat. The composition of the entire egg preparation comes between these two, as might be expected. The proteids, of course, represent the unaltered albumen of the egg coagulable by heating. We could trace no objectionable preservative. We have here undoubtedly a satisfactory method of preserving eggs, although for some purposes the presence of 50 per cent. of sugar is not desirable. The preparations answer well for cooking purposes, as in the making of custards or puddings or cakes. Necessarily the preparations are powerful foods, each tablespoonful representing the nutritive value of one egg. The preparations bore no sign of staleness or deterioration. Apart from their value for ordinary cooking purposes, it is no small achievement to be able to preserve so satisfactorily a preparation containing over 10 per cent. of soluble albumen.

OLD PEDIGREE PORT.

(MESSRS. MARTELL AND CO., GREAT TOWER-STREET, E.C.)

Pedigree port is described as a pure and reliable Spanish port grown in the choicest district, and made after the best Douro methods. We are quite certain that it is much more honest than many alcoholic liquids denominated as port. It is of a rich red colour and possesses a taste somewhat rough on the palate, but full and fruity. It cannot lay claim to elegance exactly, and we do not expect it at 1*s.* 6*d.* a bottle. For all that it is a sound and genuine wine and well adapted for the use of invalids whose means are limited. On analysis the following results were gained: extractives, 6·88 per cent.; sugar, 6·40 per cent.; mineral matter, 0·20 per cent.; alcohol, by weight 14·00 per cent., by volume 17·26 per cent., equal to proof spirit 30·26 per cent.; volatile acidity reckoned as acetic acid, 0·087 per cent.; and fixed acidity reckoned as tartaric acid, 0·356 per cent. The wine is somewhat acid. As regards alcoholic strength it is below the average for port wine.

IMPERIAL STOUT.

(BENSKIN'S WATFORD BREWERY, LIMITED, WATFORD.)

We have not examined a sample of stout with a greater proportion of malt extractives or nutritives than the one under notice. The results of analysis were as follow: malt extractives, 9·25 per cent.; mineral matter, 0·48 per cent.; and alcohol, by weight 7·73 per cent., by volume 9·62 per cent., equal to proof spirit 16·86 per cent. We could trace no objectionable preservatives. The stout is particularly well adapted for the requirements of invalids. It is of excellent malty flavour, highly nourishing, sound, and free from excess of carbonic acid gas. It is stated to be brewed from malt and hops only—that is, with no addition of sugar. It is free from sharpness of taste on account of its non-acid character. It is evidently a genuine malt liquor brewed from malt and hops only and of the best type. We understand that this stout has been used in the hospitals in South Africa, where very favourable opinions of it have been formed.

(1) BOROBENPHENE; AND (2) GLYCOBENPHENE.

(THE HENRY HEIL CHEMICAL CO., ST. LOUIS, MO., AND F. NEWBERY AND SONS, 27 AND 28, CHARTERHOUSE-SQUARE, LONDON, E.C.)

Borobenphene is a clear, colourless liquid containing, according to our analysis, glycerine, boric acid, benzoic acid, and phenol. It has a pleasant aromatic smell and, considering its ingredients, is, of course, strongly antiseptic. It is practically non-poisonous, the quantity of phenol in relation to the other antiseptics being small. Borobenphene, it is stated, does not coagulate albumen—a statement which we have been able to confirm by the fact that it is without a visible effect upon a solution of white of egg. The preparation is attractive and useful for domestic purposes. It may be used internally in, of course, restricted doses, and its taste is not unpleasant. In fact, it may agreeably be used in all cases where the application of an effectual antiseptic is desired. Glycobenphene has practically the

same composition, but differs in containing a considerable white deposit which proved on analysis to be zinc oxide. The preparation is said to give relief in eczema and to serve as an excellent dressing for wounds and sores.

DYMOL.

(LORD AND LORD, PHILADELPHIA; F. NEWBERY AND SONS, 27 AND 28, CHARTERHOUSE-SQUARE, E.C.)

Dymol is an iodine compound insoluble in acid media, but decomposed in an alkaline environment. It contains nearly a third of its weight of iodine in organic combination. The iodine is readily obtained on treating dymol with a strong oxidising agent. It is a light brown powder without any irritating properties, neutral in character and insoluble in water and acid. It is described as an alterative and stimulating antiseptic for employment in gastro-intestinal disorders. It has thus been used in the treatment of diarrhœa, dysentery, cholera, and enteric fever. In other words, it produces intestinal antisepsis and is said completely to deodorise the stools. It is, practically speaking, non-toxic.

New Inventions.

SOFT CERVIX VOLSELLA FORCEPS.

THE accompanying illustration shows the new soft cervix volsella forceps which I devised and recently exhibited to the Obstetrical Society of London. The volsella catch, grip firmly, and pull down the soft dilated puerperal cervix without tearing or injuring the cervix or vagina, the fundus uteri being always pushed down by the left hand on the abdomen. The new instrument is specially made for the soft dilated cervix in abortions, premature or full-time labours, or soft dilated diseased cervix. This instrument is better suited in many ways for the above class of case than the sharp-pointed volsella or Teale's forceps, neither of these being specially made for the purpose. The blades of the new volsella are long and broad. The blade inserted into the os uteri has a slightly convex horizontally grooved and blunted serrated surface which fits accurately into the slightly concave corresponding surface of the other blade, thus obtaining a long, broad, and firm grip of the cervix without any laceration. The posterior surface of the closed instrument is smooth and polished, so that it slides along the back or side wall of the vagina easily. The anterior surface of the blade inside the cervix has a longitudinal groove along its whole length which can be used to guide the finger or curette into the uterus. The lock of the volsella is modern and the blades can be separated entirely and made aseptic. There is a clip at the handles which can be fastened at varying degrees of tightness. The handles curve towards the perineum so as to be out of the way of the operating finger or curette. The whole instrument is very light and its weight if left hanging does not tear the cervix. The soft cervix forceps is made by Messrs. Arnold and Sons, West Smithfield, E.C.

Brook-street, W. ROBERT WISE, M.D. Edin.

THE ENTRIES AT THE MEDICAL SCHOOLS.

BY the courtesy of the deans of the various medical schools we are enabled to give approximately the number of students who have entered upon medical study this year. There is some difficulty in obtaining figures made up to exactly the same period from the different schools, but the table of entries which follows is as complete as we have been able to make it :—

ENTRIES FOR THE YEAR 1901-1902.

London.

Name of medical school.	Full medical course.	Special courses.	Dental.	Full course, 1900-1901.	Increase or decrease in full medical students over or under last year's figures.
St. Bartholomew's	84	44	—	87	- 3
Charing Cross	14	26	28	16	- 2
St. George's	13	6	—	17	- 4
Guy's	68	40	43	80	- 12
King's College	27	146†	—	25	+ 2
London	64	70	—	74	- 10
St. Mary's	35	39	1	43	- 8
Middlesex	19	39	20	22	- 3
St. Thomas's	49	12	—	47	+ 2
University College	31	62	—	35	- 4
Westminster	17	28	1	18	- 1
London School of Medicine for Women	30	8	—	23	+ 7
National Dental Hospital	—	—	12	15	- 3
Royal Dental Hospital of London	—	—	54	50	+ 4
Provincial.					
University of Birmingham	*	*	*	*	*
University College, Bristol	20	1	1	13	+ 7
University of Cambridge	115	—	—	115	No change.
University College, Cardiff	13	6	1	17	- 4
Yorkshire College, Leeds	27	15	1	38	- 11
University College, Liverpool	50	6	14	68	- 18
Owens College, Manchester	54	67	32	47	+ 7
University of Durham, Newcastle-on-Tyne	26	31	7	27	- 1
University College, Sheffield	12	1	3	8	+ 4

* Information not supplied.

† Including 68 Anatomy and Physiology, 36 Bacteriology, and 23 Public Health.

WATER-SUPPLY OF NEWPORT.—The Waterworks Committee of the Newport (Mon.) Borough Council made an inspection of the reservoirs of the town on Oct. 23rd. The lower reservoir was found to be practically empty, and in the upper reservoir there were about 50,000,000 gallons of water. It was decided to curtail the supply immediately. The water is now cut off from 11 P.M. until 5 A.M.

WEST OF ENGLAND EYE INFIRMARY, EXETER.—The annual meeting of the subscribers to this institution was held on Oct. 25th under the presidency of Mr. Smyth Osbourne. The secretary read the ninety-third annual report which alluded with satisfaction to the completion of the first two sections of the new building, they having been formally opened by Lady Clinton on Oct. 4th last. The financial statement showed that the ordinary income was £1435 and the ordinary expenditure £1442. The medical report stated that there had been 3010 patients under treatment during the past 12 months, of whom 2588 had been discharged, leaving on Sept. 30th last 389 out-patients and 33 in-patients under treatment. The daily average number of in-patients during the year had been 45. Mr. Hamlyn, high sheriff of Devon, was elected president for the ensuing year.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 2, 1901.

The Isolation Accommodation of the Metropolis.

THE increasing popularity of isolation hospitals and the difficulty which there is in meeting the demands which such popularity creates, form together one of the most serious problems of present-day municipal administration. As far as our experience and information go none of the big cities of the world is so well equipped in the matter of isolation accommodation as is London; and hence it may be of interest to examine the position of the metropolis at this moment in respect of its ability to accommodate its infectious sick. The expenditure upon such provision has been, and is, very material, but notwithstanding the fact that the Metropolitan Asylums Board has more than doubled its accommodation for fever cases since 1891, and that the proportion of scarlet fever admissions to notifications has risen from 42·82 to 75·15, we are still face to face with the fact that more accommodation is needed. In other words, the existing accommodation is not sufficient for the isolation of what may be called the ordinary infectious diseases, or, rather, such diseases as public health administration has, up to the present, deemed it desirable to provide accommodation for—i.e., scarlet fever, diphtheria, and enteric fever. Certainly provision is also at hand for the isolation of small-pox, but unfortunately it has been found difficult to keep unoccupied by other diseases all the beds originally intended for small-pox, and a threatened epidemic of this disease is found rather to dislocate the existing arrangements. More particularly is this the case when the murmurings of an exotic disease like bubonic plague tend to remind us that our boasted immunity from this disease may be imaginary rather than real, and when it is considered desirable to set aside a certain number of beds to isolate first cases of this malady. It is an unfortunate and unaccommodating dispensation of nature that the maximum prevalence of several diseases occurs at practically the same season or seasons of the year. Were there a degree of alternation in their prevalence administrative measures would be simplified. As nature works at present, there is an undue strain placed upon our hospital resources in the autumn and the winter months, and when small-pox tends to prevail there is likely to be a crowding-out of the less serious diseases.

Under these circumstances the Metropolitan Asylums Board has to adapt itself to the exigencies of the situation, and the distribution of its beds at the present juncture does not meet with the approval of the Town Council of the Royal Borough of Kensington, which body has addressed a communication to the Metropolitan Asylums Board on the subject. Briefly stated, the Kensington Town Council deplores the temporary discontinuance of the admission of scarlet fever and diphtheria convalescents into Gore Farm Hospital at a time when these two diseases are unduly prevalent. This discontinuance has, we take it, been deemed necessary in order to provide, in one or another fashion, for the prevention or control of small-pox and bubonic plague. The Kensington Town Council, while admitting the necessity for the provision of beds for the isolation of small-pox, does not take such a pessimistic view of small-pox prospects as does the Asylums Board, and expresses the hope that the action of the metropolitan sanitary authorities will hold the disease in check. Curiously enough, the action or inaction of the guardians *quâ* vaccination receives no mention in the letter. We must confess that we are unable to share the optimism of the Kensington councillors even while we venture to hope that these views may prove to be correct. It appears to us that if small-pox in anything of the nature of an epidemic arises from the present smouldering embers London may be face to face with a serious emergency within the next few months, especially as the maximum seasonal prevalence of the disease has yet to come. Moreover, the returns of the last few days are not by any means encouraging. It is suggested that the Asylums Board would do well to provide hut accommodation for small-pox on the Joyce Green estate adjoining the hospital ships, but doubtless the managers have already considered, and are still considering, the practicability of this measure. It is conceivable that to provide adequate drainage on a site such as this for a large number of huts may be no simple affair and might interfere very materially with the permanent arrangements. Still, the managers will do well to keep this question to the front. But in the meantime ample accommodation should, in our opinion, be held in reserve for small-pox even if in the interval the accommodation for scarlet fever and diphtheria may have to be curtailed. When the isolation problem is viewed from a broad standpoint the admission has to be made that it is a very difficult matter to provide permanent accommodation which will suffice in the presence of epidemics of two diseases, to say nothing of the possible outbreak of a third. Assuming that such accommodation does not exist the most reasonable course is surely to select for isolation the more fatal class of the diseases in question, and if all cases of any one class cannot be isolated to make a selection of such cases as are most likely to be a danger to the public. Selective action in this sense may have in the future to be exercised more than it has been in the past.

The Asylums Board has now accommodation for over 5000 cases of infectious diseases other than small-pox, and when the projected measures are completed the provision in this sense will amount to nearly 6100 beds. For small-pox the existing accommodation, exclusive of huts on the Joyce Green estate, is some 1500 beds, and when the Joyce Green Hospital is erected 400 beds will be added to this number. This total provision for small-pox is, as DR. ORME DUDFIELD, the medical officer of health of Kensington, points out in one of his recent reports, materially below the 2700 recommended by the Royal Commission in 1882. Whether the proposed accommodation will prove adequate or not is a subject upon which we would rather not

prophesy. It depends, we think, upon the degree in which primary vaccination and *revaccination* are carried out and upon the *type* of small-pox which we may have to encounter. With neglected vaccination or neglected revaccination and small-pox of a high degree of infectivity all the factors will be present which will enable small-pox to laugh at the recommendations of the Royal Commission. In the absence of the epidemic type of small-pox a smaller number of beds will suffice even with an indifferently vaccinated community.

Puerperal Eclampsia.

AMONGST the most important of the problems in obstetric medicine that await solution is the causation of eclampsia and the best method of dealing with this disease when it occurs. These questions have recently been fully discussed both at the meeting of German gynæcologists at Giessen and before the Obstetrical Society of London.[1] It cannot be said that either of these discussions has done much to elucidate our knowledge of this condition. The theory that eclampsia is due to a toxic state of the mother's blood is the one that holds the field at the present day. We are, however, still ignorant of the nature of the toxin, ignorant of its source, and ignorant of the precise manner in which it produces its effects. If we follow the teaching of the French school of obstetricians we shall give our adherence to the view that the liver is the organ primarily at fault and that the essential condition is one of hepato-toxæmia, while if we accept the current German teaching we shall believe that the affection of the kidneys is the primary condition and that the other pathological changes met with in different organs play but a secondary part; they are, indeed, to be regarded as the result of the action of the poisons, and not as the cause of their presence in the body. The occurrence of convulsions during labour is a complication of so alarming a character and of so grave a nature that there is a danger of our bestowing too much attention upon the fits themselves and too little upon the very important pre-eclamptic condition—viz., the condition of the patient preceding the onset of the convulsions. The existence of the toxæmia of pregnancy, upon which so much stress is laid by many writers as the *fons et origo* of the majority of the disorders of pregnancy, is hardly as yet placed upon a firm scientific basis. Even if we admit that such a toxæmia does exist there are many blanks in our knowledge of the relationship between it and some of the diseases which it is supposed to produce. We are at the present day in considerable danger of basing our treatment of eclampsia upon a theory which further investigations may show to be far from the truth. The toxic theory no doubt furnishes a good working hypothesis, but in using it we must ever bear in mind the slender foundations upon which it rests.

The discussion at Giessen is chiefly remarkable for the large amount of experimental work that was brought forward, some of it of considerable value. It is mainly by the accumulation of such work carried out in the laboratory that our knowledge of this disease is likely to be increased. The paper read before the Obstetrical Society of London was concerned with the treatment of eclampsia by saline transfusion. In the discussion that followed many of the speakers expressed some doubt as to the advantages likely to be derived from this mode of treatment. It was pointed out that on their first introduction both morphia and chloral were lauded as infallible panaceas for this disease, and yet at the present time their true value is far from being fully established. In the same way this method of saline transfusion will no doubt have its day of fashion and at last take its proper place in the therapeutics of eclampsia. The treatment is based upon the toxic theory and if this theory be correct it is likely to give good results. There is considerable danger, however, of this mode of treatment being discredited if it be applied indiscriminately to all classes of cases.

We are inclined to think that if a correct knowledge of the causation of eclampsia is ever to be arrived at attention must be mainly directed to the pre-eclamptic stages of the disease. Further investigations must be devoted to careful observation of all departures from the normal in the health of the pregnant woman. Then, and then only, will it be possible to practise preventive medicine—the highest art of all—in the case of the pregnant woman and of the fœtus in utero. The opportunities of a scientific study of the various problems connected with pregnancy are at the present day almost *nil;* the length of time such patients remain in lying-in hospitals before their confinement is too short for any prolonged observations to be made, and work of this nature is impossible in private practice. It is an encouraging sign to see that, mainly owing to the strenuous advocacy of Dr. J. W. BALLANTYNE and the generosity of Dr. FREELAND BARBOUR, a bed is to be endowed and set apart for the study of the diseases of pregnancy in the Royal Maternity Hospital of Edinburgh. We can imagine no more worthy object for philanthropy than the endowment of such beds in some of our large maternity hospitals where the diseases of pregnancy and of the unborn child could be investigated with all the advantages of modern science. It is by research in this direction that we are most likely to gain a true knowledge of the problems of eclampsia and of the best means of preventing this dangerous complication of pregnancy.

[1] THE LANCET, April 27th (p. 1207) and May 11th (p. 1336), 1901.

The National Dental Hospital.

ON the occasion of the distribution of prizes at the National Dental Hospital and College on Oct. 24th, Dr. G. VIVIAN POORE, who distributed the prizes, observed that it could not have escaped the notice of those assembled that the subjects for which he had handed out rewards were numerous and varied, and that the student of dentistry was expected to have a knowledge not only of the science underlying his professional work but also a knowledge of the more mechanical parts. There was, perhaps, no profession in which science and practice were so intimately blended. There was sometimes an outcry against specialism in medicine, and, perhaps, in some departments of medicine specialism was a little overdone, but nobody could cavil at the whole science and art of dentistry as an unnecessary specialty. It was an absolutely necessary specialty and one which could be perfectly defended and justified. It was well

known that the physician was supposed to be an offshoot from, or development of, the priest, and in the same way the surgeon had had his origin with the more mechanical person, the barber, and it was not many centuries ago when the barber and the surgeon were one and indivisible. The barber was a gentleman who wielded a sharp instrument sometimes clumsily and then had to repair the damage, and it was from this that the surgeon had gradually emerged. The dental profession was evolved in the same way and it remained a handicraft down to comparatively recent times; it was only within the memory of some of the older members of the profession that the dentist began to make a stand and determined that his profession should be a real profession, and that it should be established like the other branches of medicine.

It was very curious, said Dr. POORE, to note how every profession had to wait for the advance of collateral professions and handicrafts before it could advance itself, and he instanced as an example the profession of the chemist. Chemistry could not have reached the high condition in which it was now but for the help of the glass-blower. After the advance of chemistry and metallurgy it was possible to advance in dentistry, and there was nothing that had caused the recent progress in dentistry more than the importation at the beginning of last century of india-rubber and the invention of vulcanite which had made so many dental operations possible. Of course it was said of dentistry, as it was said of almost everything else, that as a craft and a science it was old as the hills, and that in Egyptian mummy cases evidences had been found of artificial teeth, but Dr. POORE doubted if the dentures found in Egypt were quite as practically useful as those of the present day. He doubted whether if CLEOPATRA had artificial teeth she wore them much except on a Sunday or when she was going on the water to meet ANTONY, and he rather suspected that when she came home to a little supper with CHARMIAN she took them out. This view of the artificial teeth of the ancients is, we believe, generally held; the dentures were æsthetic, not practical, in their object. In the present day artificial teeth are not only for ornament but also for use, in particular, Dr. POORE pointed out, they robbed old age of one of its disabilities. It was said that with the advance of age all the senses declined with one exception, and that was the sense of taste. There was no doubt but that dentistry had added to the comfort of life; and the profession at large was under a great obligation to the dental branch of it because it was becoming recognised day by day that for general health sanitation of the mouth was all-important and that amongst the measures of preventive medicine, or rather the officers of preventive medicine, the dental profession was taking a first place.

The special branches of medicine have very often originated great advances which are of value to medicine as a whole, and perhaps this cannot be better illustrated than by the obligation of medicine and of surgery to the dental profession in the matter of anæsthetics. Dr. POORE laid stress upon this, pointing out that dentists had to deal largely with an operation which caused short, sharp pain, that to them the practicability of annulling that pain, which was only momentary, occurred, and that therapeutic measures were devised and carried out successfully very largely at their instigation. The dentists had to wait until the chemist had provided them with anæsthetics but they first dared to use them. Dr. POORE concluded a highly interesting address by alluding to the life of the dentist. Dentistry, he said, while a most valuable side of medicine, was a harassing and trying side, and it was very important for its followers to have some pursuit to relieve the burden of their professional life, some pursuit, scientific or otherwise, which took them out of doors, which refreshed their minds and gave them health. In our experience dentists take good care to get the surcease from toil which Dr. POORE recommends for them. They seem to us to cycle, to golf, and to fish with enviable regularity.

Annotations.

"Ne quid nimis."

THE HEALTH OF THE KING.

WE have every ground for stating that the recent rumours concerning the health of His Majesty the King are entirely without truth or foundation. He is in good health and has undergone no operation whatever. Some of our readers may have seen statements in certain newspapers so detailed in character as almost to preclude their resting entirely upon journalistic imagination. We are glad to be able to assure them that they need give no credence whatever to the sinister but, happily, untrue stories the publication of which cannot be too strongly deprecated since they cause needless and poignant anxiety to the country at large.

THE IMPROVEMENT OF THE HUMAN BREED.

A HUXLEY Memorial Lecture, established by the Anthropological Institute in 1900 in memory of the late Professor Huxley, is given annually at the opening of the institute's session in October on some subject illustrating the work of Huxley in connexion with anthropological science, especially in regard to the origin and development of mankind. This year's lecture was delivered by Mr. Francis Galton, formerly president of the institute, who took as his subject the Possible Improvement of the Human Breed under the Existing Conditions of Law and Sentiment. The aim of the lecturer was to give a scientific basis to the problem of race improvement. The lecture will appear in full in the next issue of the half-yearly journal of the Anthropological Institute to be published in January next.

LORD ALVERSTONE AT ST. GEORGE'S HOSPITAL.

THE prize-giving at a metropolitan hospital is generally graced by the presence of some person eminent in science, literature, or art, who hands over the prizes to the fortunate recipients and is expected to deliver his soul upon some subject more or less connected with the art of medicine. The prize-giving at St. George's Hospital, held on Oct 28th, was honoured by the presence of the Lord Chief Justice of England, and the meeting was held in the board-room, being presided over by the Dean of the School, Dr. Isambard Owen. Lord Alverstone expressed his thanks for the honour done to him in asking him to be present and with becoming modesty mentioned that his chief claim to be chosen was that he had been an almoner of gifts for an object closely connected with the welfare of the medical profession. Nearly 20 years ago a distinguished friend of his, a graduate of Cambridge and an old Harrovian, had left at his death a sum of money to be given at the discretion of the speaker to found a scholarship either for science or medicine in the University of Cambridge or of London. Lord Alverstone continued that mindful of his own connexion with the University of Cambridge he had devoted the money to that corporation and had

founded the John Lucas Walker Studentship in Pathology. The Lord Chief Justice went on to speak of the enormous advances which had been made during the past century, not only in medicine and surgery, but also in the character and status of medical students. He continued by remarking that some 12 years ago in the course of his professional work he had been much struck by the want of intercommunication between the various hospitals both in the metropolis and of these with the great provincial hospitals. Matters, however, might have improved since then. We think that we can assure Lord Alverstone that matters have improved. Owing to the multiplication of medical societies, to the reports of the proceedings of these societies in the medical press, and to the greater facilities for travelling, any work done in any great hospital of the United Kingdom is known throughout that kingdom in a very short space of time. We are certain that if any discovery is made which apparently tends to the good of humanity its discoverer is the last man to keep it back for the benefit of his own school. There is one thing, however, which may have led Lord Alverstone to imply—as we gather from the report of his speech that he did imply—that the medical profession is wanting in "liberality of dispensation of knowledge," and that is this: discoveries in the medical profession, whether new operations, new facts in pathology or bacteriology, new views on treatment, or new theories as to disease and its causes, must be carefully checked over and over again. Premature disclosure, as happened quite against his will in the case of Dr. Koch's tuberculin, can lead to nothing but disappointment. So it is that perhaps it appears to a layman that the discoverer of some advance in the field of medicine or surgery has been exploiting such discovery for himself. But those who are among the toilers in such fields know that the discovery is only kept back until the crop is fully ripe.

GUY'S WILL.

REFERRING to the notice to correspondents under the heading of "Looking Back" in this issue we have extracted the following interesting particulars connected with Thomas Guy's will from the "Dictionary of National Biography," vol. xxiii., p. 391. "Having thus a vast fortune he decided to carry out a project long contemplated, of providing for the numerous patients who either could not be received in St. Thomas's Hospital or were discharged thence as incurable. He consequently, in 1721, took a lease from the St. Thomas's governors of a piece of ground opposite the hospital for 999 years, and having pulled down a number of small houses began the erection of a hospital on the site in 1722, intending to place it under the same administration. When the building was raised to the second story he changed his mind and decided to have a separate government. The building, which cost £18,793, was roofed in before the founder's death, which took place on Dec. 27th, 1724, in his eightieth year. He was buried with great pomp, after lying in state at the Mercer's Chapel. Guy's will went through three editions in 1725 and was reprinted by the governors of Guy's Hospital in 1732. It was signed on Sept. 4th, 1724, and bequeaths lands and tenements in Staffordshire, Warwickshire, and Derbyshire to grandchildren of his deceased sister, about £75,000 in 4 per cent. annuities, mostly in sums of £1000, to about 90 cousins in various degrees, as well as some persons apparently not relatives, and annuities varying from £10 to £200 per annum to others, mostly older relatives, being the interest on about £22,000 stock. £1000 was left to discharge poor debtors in London, Middlesex, or Surrey in sums not exceeding £5 each (600 persons were relieved by this benefaction, Maitland, p. 668). £400 per annum was left to Christ's Hospital for the board and education of four poor children annually, to be nominated by the executors, the governors of Guy's, with preference to Guy's relations. His almshouse and library at Tamworth was left in trust for the maintenance of 14 poor persons of parishes surrounding Tamworth, excluding the town itself, preference being given to his own poor relations, a portion of the endowment being applied to apprenticing children, and nursing four, six, or eight persons of the families of Wood or Guy; while £1000 was left to other persons for charitable purposes. The remainder of his fortune, amounting to more than £200,000, was left to Sir Gregory Page, Bart., Charles Joye, treasurer of St. Thomas's Hospital, and several other of its governors, including Dr. Richard Mead (*q.v.*) to complete his hospital for 400 sick persons who might not be received into other hospitals from being deemed incurable, or only curable by long treatment; lunatics up to the number of 20 were to be received for similar reasons; but full discretion was given to the executors for varying the application of the funds. The executors and trustees were desired to secure an Act of Parliament incorporating them with other persons named, all governors of St. Thomas's, to the number of 50, with a president and treasurer; they were to purchase lands, ground rents, or estates with the residuary estate, and maintain the hospital by the proceeds, any surplus to be applied to the benefit of poor sick persons or for other charitable uses. The will was proved on 4th Jan., 1724–5. The required Act of Parliament was obtained in the same year (11 George I., cap. xii.), and gave power to the executors to set up a monument to Guy in the chapel, which was designed by John Bacon, R.A."

"ARSENICAL POISONING FROM BEER-DRINKING IN ITS RELATION TO THE STUDY OF INEBRIETY."

IN the Proceedings of the Society for the Study of Inebriety for September is published a paper with the above title by Dr. T. N. Kelynack. The writer draws attention to the recent outbreak of arsenical poisoning in beer-drinkers in the north of England and describes the clinical features of the cases which occurred; he also discusses the etiology of peripheral neuritis, upholding Schmiedeberg's teaching that alcohol is a true nerve and muscle poison; he insists, further, that its toxic action may be augmented and enforced by other agents. Dr. Kelynack then asks the question, What fresh light does the recent outbreak of arsenical poisoning in beer-drinkers throw on the pathology of inebriety? He argues that alcohol and arsenic act upon nerve tissue in many ways in a similar and in some respects in an identical manner, and that therefore it will probably be found that very real and definite cellular changes underlie what is usually termed inebriety. He supports this theory by quoting the works of Mott, Ford Robertson, and others in this country, and the researches especially of Lugaro and Marinesco among continental investigators, which have afforded evidence as to the true nature of many forms of mental disease, and Dr. Kelynack is of opinion that these observations when further pursued will bring inebriety into the group of morbid conditions dependent upon derangement of nerve-cell vitality. He also considers that in the future the influence of possible enforcing and accentuating agencies, such as arsenic, will have to be considered more fully. This drug, alcohol, and similar bodies have been proved to be capable of acting directly on the neuron. The degree of action depends upon the nature and intensity of the toxic agent, and doubtless also on many physico-chemical changes the nature of which has not yet been determined. We agree with the writer in his remarks on "considerations for the future." Beer has undoubtedly been long contaminated with arsenic in some districts. The danger from contaminated malt and the extensive use of sugar substitutes in this country have

been amply demonstrated and we trust that history will not repeat itself. We support Dr. Kelynack in saying that scientific investigation should be undertaken by those intrusted with the care and management of inebriates in the various retreats and reformatories. The admirable work which is being carried on by pathologists in connexion with our public asylums, and especially in those under the control of the London County Council, warrants the belief that similar researches into the factors underlying inebriety would be fruitful in valuable results both to science and to humanity.

SMALL-POX IN LONDON.

SMALL-POX is increasing day by day. On Sunday, Oct. 27th, there were 21 fresh cases admitted to the hospital of the Metropolitan Asylums Board; on Monday, Oct. 28th, there were 25 fresh cases; on Tuesday, Oct. 29th, there were 28 fresh cases; and on Wednesday, Oct. 30th, there were 29 fresh cases. In view of the continuation of the epidemic it is stated that the staff of the General Post-Office have been strongly advised to be revaccinated without delay.

THE ELECTION OF DIRECT REPRESENTATIVES.

OUR advertisement columns contain formal notices that, pursuant to the Medical Act of 1886, elections are about to be held of two members to represent the registered medical practitioners of England on the General Medical Council and of one member to represent the registered medical practitioners of Scotland. The candidates as yet before the English constituency are Dr. J. G. Glover, Mr. George Brown, Dr. S. Woodcock, Mr. George Jackson, and Dr. C. W. Hayward; while there will be probably a contest in Scotland as Dr. C. E. Robertson has announced his intention of standing.

SPONTANEOUS RUPTURE OF THE ABDOMINAL WALL IN ASCITES.

SPONTANEOUS rupture of the abdominal wall in ascites is a very rare incident. Most of the published cases belong to a period when paracentesis was less practised than it is now. At the meeting of the Société Médicale des Hôpitaux of Paris on July 19th M. Pierre Merklen and M. Gougelet related the following case. A woman, aged 68 years, had ascites for nearly two years, probably from alcoholic cirrhosis of the liver. The heart was weak and there was œdema of the lower limbs. From May, 1899, to February, 1901, paracentesis was performed 25 times, and from 14 to 16 litres of fluid were removed on each occasion. The patient had an old umbilical hernia. The abdominal distension caused the opening to enlarge until several fingers could be passed into it and the hernia became as big as a large orange. It diminished after paracentesis, but in spite of methodical compression enlarged again. The umbilicus gradually became thinner, and in December, 1900, a little blackish scab appeared on its summit. This disappeared after paracentesis, but then recurred. On March 15th, 1901, 17 days after the twenty-fifth paracentesis (the interval between the paracenteses being usually 25 or 26 days) the scab fell off, disclosing a fistula of the breadth of the meatus urinarius and with suppurating walls. The ascitic fluid at once began to flow. The patient, seated on a chair, voided it in about two hours. On the following day there was continual oozing with disappearance of the abdominal swelling and the œdema of the legs. But the day after rupture there were abdominal pains and fever, and the next day intractable vomiting and dry tongue. Death from peritonitis occurred on the seventh day after rupture. In the recorded cases of rupture of the abdominal wall in cases of ascites paracentesis is not mentioned. The umbilicus was most frequently the seat of rupture and often, but not invariably, an umbilical hernia prepared the way for distension and sloughing of the umbilical cicatrix. In cases of ascites complicated by a communicating hydrocele rupture has taken place in the scrotum. Rupture is most likely to occur where the skin is thinnest. However, it has occurred in the abdominal wall between the pubes and umbilicus—after phlegmonous gangrene. In the other cases rupture was preceded by greater or lesser sloughing of the skin and suppuration; hence the danger of peritonitis. Death is the usual result of rupture at the umbilicus, but recovery is not impossible and old writers thought this "puncture made by nature" a fortunate incident. Rupture of the abdominal wall in cases of ascites should be prevented. The only treatment when sloughing is threatened is frequent paracentesis.

THE VENTILATION OF THE "TWOPENNY TUBE."

THERE is no doubt that the measures adopted on the Central London Railway for the ventilation of the "tube" are, in face of the enormous number of people daily travelling on the line, inadequate. We pointed out some time ago that it is well known that the air of the "tube" has not grown pleasanter as the popularity of the system has increased. Even on passing the booking-offices of the stations or the lift exits an unpleasant sickly whiff is experienced. Our remarks are now fully borne out by the results of a series of interesting experiments made by Mr. A. Wynter Blyth, the medical officer of health of St. Marylebone, and his son. Details of these experiments will be found in the presidential address which we publish in our present issue delivered by the former at the annual meeting of the Incorporated Society of Medical Officers of Health on Oct. 25th. It is found that the carbonic acid gas at some stations was no less than 10·3 parts per 10,000, while between the stations—that is to say, in the tunnels—it reached 11·9. Now, since the average amount of carbonic acid gas in the outer air seldom exceeds 4 parts per 10,000 and that whenever the amount of carbonic acid gas in the air of a room exceeds this amount by two parts per 10,000 it is not fresh and has a stuffy smell, six parts per 10,000 has been fixed as the limit of impurity. The "tube" air contains nearly twice this amount. We remarked long ago that it is nonsense to say that the mere passage of the trains through a tight-fitting tunnel is sufficient to ensure satisfactory ventilation. Mr. Wynter Blyth's experiments clearly show that where the ventilation depends entirely on the passage of the trains, although there is so much movement of air, and so much sucking in from above and blowing out from below, a good portion of the air must be driven backwards and forwards unchanged in the tube; in other words, the tunnel air is diluted, but the whole of it is never swept out. This has all along been our contention. The amount of carbonic acid gas in the tunnels—and, be it remembered, this is very largely, if not entirely, of human origin—is more than double that of the outside air. It would be interesting to know what a bacteriological examination would reveal. As time goes on, unless additional and more effective ventilation by fans is adopted, the condition of the tunnel will go from bad to worse. These observations might usefully have been extended to the air of the cars; the results would probably have shown a greater pollution still. It is remarked that even as it is, the air of the Metropolitan Railway, as regards carbonic acid, is more than twice as bad. We are not sure that this is correct, for in the methods usually adopted for estimating carbonic acid gas the sulphurous gases are included. We are inclined to doubt whether the carbonic acid from human sources is any more on the Underground Railway than in the tunnel of the "Twopenny Tube." The chief impurities in the former case are derived from coal. It is, further, evident that others

share our view as to the unpleasant character of the air on the Central London Railway, for we understand that an experiment with a system of ozonisation is going to be made shortly by a syndicate.

THE LATE PRESIDENT OF THE UNITED STATES.

THE medical staff attending the late President William McKinley, whose lamented death occurred on Sept. 14th, have issued a very detailed clinical and pathological history of the symptoms and the effects of the bullet-wound. This report, which would occupy about 16 to 18 columns of THE LANCET, will be found in *American Medicine* of Oct. 19th and is signed by the following gentlemen: P. M. Rixey, Matthew D. Mann, Herman Mynter, Roswell Park, Eugene Wasdin, Charles McBurney, and Charles G. Stockton.

THE INFLUENCE OF CLIMATE UPON FUNCTIONAL NERVOUS DISORDERS.

PROFESSOR F. S. PEARCE, neurologist to the Philadelphia Hospital, in the *New York Medical Journal* of Oct. 5th deals with the interesting and practical subject of climatic influence in regard to functional nervous and mental disorders. The effect of decreased atmospheric pressure in permitting a freer circulation in the surface of the body is an important fact in aiding circulation, just as massage applied to the body also increases the circulation of blood owing to the *vis a tergo* produced by the masseur. It is also possible that, as pointed out by Jaquet,[1] the action of high altitudes is not only a diminution of pressure but a chemical modification of the blood, in that more nitrogen is admitted into the blood under conditions of lowered atmospheric pressure. So that probably there is a double mode of action—viz., an increase of the peripheral circulation and an increase of the nitrogenous element in the general circulation. To these must probably be added the purity of the air and the more intense sunlight of high altitudes, both of which, according to Dr. Pearce, act as stimulators of bodily metabolism. The effect of winds is reflex, the strong stimulation of the skin and peripheral nerves causing increased excitability of the general bodily functions. The results, however, are not uniformly beneficial in all subjects. Hence in neurasthenia, where a weakness and irritability of the nervous system are the dominant conditions, high winds are to be avoided and altitudes above 2000 feet should also be eschewed, because they tend to hasten metabolic processes too rapidly and therefore cause physiological overwork of the central nervous system. This is also shown by the palpitation of the heart occurring in normal (or nervous) people at high altitudes. Similarly hysterical subjects are found to do badly at high altitudes for the same reason of increased excitability caused by overactivity in the peripheral circulation, and insomnia in them is more pronounced at heights, due perhaps to the increased circulation in the membranes of the brain. Climates with continual fogs and a low atmospheric pressure are also bad for the neurasthenic and the hysterical and the tendency to "catch cold" is aggravated in a moist atmosphere. Melancholia, on the other hand, needs increase of circulation and of metabolism, and subjects of melancholia usually improve by going to the mountains, where reduced atmospheric pressure, purer air, and more intense sunlight are obtainable than in the lowlands—a trio of meteorological conditions with a powerful adjuvant effect. High winds will be stimulating to the melancholiac or to the hypochondriac and will tend to benefit him. Chorea is a disease made worse by high winds and increase of altitude beyond the happy mean of a few hundred feet. As regards insomnia Dr. Pearce looks upon a condition of cerebral vaso-dilatation as being the main factor, so that whatever will tend to depletion or vaso-constriction of the brain will tend to allay insomnia. Thus it is that warm baths and massage before bed-time help to secure sleep. If these measures and drugs fail nothing is better than a quiet sea-voyage.

[1] Archives des Sciences Physiques et Naturelles, December, 1900.

THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Cape of Good Hope received at the Colonial Office on Oct. 24th states that for the week ending Oct. 19th the cases of plague in the Cape Peninsula numbered 1, that of a European. At Port Elizabeth the cases numbered 1, also that of a European. For all other places the cases numbered 1, that of a Chinaman. The deaths from plague were as follows: Cape Peninsula, 1, a European; Port Elizabeth, 1, a Chinaman; all other places, 1, a Chinaman. The area of infection remains unchanged with the exception of 1 case of plague, that of a Chinaman discovered at Uitenhage. The cases of plague among persons under naval and military control number 1, that of a private in the 1st Battalion Royal Scots employed as cook at Greenpoint Camp, Cape Town. As regards the Mauritius a telegram from the Governor received at the Colonial Office on Oct. 25th states that for the week ending Oct. 24th there were 71 cases of plague and 37 deaths. With regard to Egypt the Director-General of the Sanitary Department writing from Cairo Oct. 20th states that during the week ending Oct. 20th 3 cases of plague and 2 deaths from the disease have been reported from all Egypt. Alexandria has reported 1 case and 1 death. Mit-Ghamr 1 case and Zeftah 1 case and 1 death. All cases and deaths during the last week have occurred among Europeans of Greek nationality.

POSTPONEMENT OF THE SECOND INTERNATIONAL CONGRESS OF THE MEDICAL PRESS.

AN official circular has reached us announcing the postponement of the Second International Congress of the Medical Press. The first congress, it will be remembered, was held in Paris from July 26th to the 28th, 1900. It was then agreed that national associations of the medical press should be formed in the various countries represented. The Paris committee which had organised the first congress was to prepare a scheme or a set of rules for the formation of an international association of the medical press. The draft of this project was to be sent to each national association, by which it was to be discussed and, if necessary, amended. Then the delegates of each national association were to meet this year in Brussels, to submit their amendments to each other, and jointly to draw up a definite scheme. The meeting of these delegates was to be held a day or two before the assemblage of the Second International Congress and the congress was to confirm or to amend the work of the delegation. The plan, it will be seen, was thorough in all its details, and it was fully explained in THE LANCET of April 27th last (p. 1237). But it is easier to frame a constitution on paper than it is to carry it out in practice. As we foresaw, the position and character of the various medical journals are so very different that it is no easy matter to bring them together. Then there is the fundamental difficulty of defining what constitutes a medical journalist. The Brussels committee appointed to organise the Second International Congress of the Medical Press now explains in its circular that it has not yet been able to accomplish its task. There has been an enormous amount of correspondence and this has rendered manifest the disagreement that

prevails as to the nature of the questions that should be submitted to the congress. The principle of forming an international association of the medical press is enthusiastically approved, but there is a great diversity of opinion as to how this association should be composed. To hold another congress before a better understanding can be arrived at would only result in eloquent but probably futile discussions. Therefore, the Brussels Committee of Organisation proposes that the second congress should be postponed till next year. It further proposes that the central committee nominated at Paris last year should utilise the meeting of this year for the constitution of a universal committee and the elaboration of the statutes of the international association. There is every reason to believe that this project will be accepted. In that case the Paris Central Committee will call upon the medical press of each section to designate representatives to attend this proposed preparatory meeting. The circular concludes by requesting the medical journals to which it is addressed to approve this plan of action. Communications to that effect, or making any other suggestions, should be addressed to the secretary, Dr. V. Pechère, 140, rue de la Loi, Brussels. Under these circumstances it seems to us that the best course is to endorse the action of the Brussels committee. It is certainly no use to hold a congress unless there is a fair prospect of arriving at a general and practical agreement.

BLOOD-PRESSURE AND CHLOROFORM.

IN the course of some very instructive experiments on the effect of chloroform upon the blood-pressure in the lower animals Dr. R. D. Rudolf of Toronto records the following observations. He was struck by a curious fall of pressure which occurred more than once when dogs were under the influence of morphine and chloroform. In these cases the latter drug had been discontinued for several minutes before the fall occurred, and although no steps to restore the pressure were taken—indeed, while the conditions of experiment remained unchanged except by the lapse of time—the pressure rose to its original level. The tracings given suggest vagal irritation, a possibility Dr. Rudolf discusses, but no reason for the irritation was present, and as the pressure recovered itself under unchanged conditions it is hard to understand how such a factor was really at work. With regard to the effect of gravity upon the circulation, this observer's experiments confirm those of Leonard Hill and Barnard. Thus a chloroform-morphined animal will, upon raising its head and body, show a marked fall of carotid pressure; when it is placed horizontally the blood-pressure becomes over-compensated but soon returns to the normal. The compensation is held to be due partly to increased rate of heart-beat and to arterial constriction and partly to contraction of the abdominal walls. Dr. Rudolf found that "the lowering of a pole of the body does not raise the arterial blood-pressure in it so much as raising that pole lowers it." It is important to note that dogs vary very much in the extent to which blood-pressure is modified by the action of gravity under chloroform, and that cats especially are immune from such effects, while, as Leonard Hill has pointed out, some monkeys actually overcompensate, showing an increased blood-pressure when put into the feet-down posture. Generally, animals which habitually carry themselves vertically compensate more rapidly and better than those which normally assume a horizontal position. But such compensation sooner or later fails if the feet-down posture is maintained. Dr. Rudolf believes further—and his tracings appear to bear out his contention—that pressure exerted upon the abdomen is unable to restore carotid blood-pressure unless it is so firm as to compress the aorta. He regards as wholly inadequate the commonly accepted view that pressure acts by forcing the blood out of the abdominal veins and so fills the heart. It has long been known that a tourniquet upon the abdominal aorta is one of the best means of raising general blood-pressure. Further, he finds that division of the spinal cord always produces a great lessening in the compensation for the feet-down position. Even when the vessels of the splanchnic area are not paralysed, the spinal section having been made well below the seat of the issue of these nerves, a very marked fall seems to follow the feet-down position, while no compensation occurs. "This would point," Dr. Rudolf says, "to the fact that the vessels of the lower part of the body are very largely concerned in the keeping up of the normal blood-pressure in the feet-down position, because when they are paralysed the pressure markedly falls." These conclusions—or perhaps it is more accurate to say these facts—are of great importance and are grouped by Dr. Rudolf as an introduction to his further researches.

MODE OF TERMINATION OF THE RENAL NERVES.

IN an article contributed to the nineteenth volume of the *Anatomischer Anzeiger* Dr. v. Smirnow gives the results of his investigations on the mode in which the renal nerves terminate. It was found that besides the nerves distributed to the walls of the vessels there were others which are in close relation to the tubuli uriniferi. These last form a plexus on the membrana propria of the tubules, and from the plexus varicose fibres proceed that terminate in dendritic or tree-like branches named "epilemmal nerve endings." Such endings are found both on the outer surface of the capsules of Bowman and upon the contorted tubes. Other branches of the plexus perforate the membrane and running between the cells of the tubuli and on their surface terminate in very different ways in the form of "hypolemmal nerve endings." They often present a grape-like aspect and resemble the nerve terminations that are found in the salivary glands.

THE CHEAP PISTOL AGAIN.

WRITING of the murder of President McKinley we dwelt upon the unnecessary and avoidable danger to human life which is the result of the unrestricted sale of cheap pistols—toys which are useless for purposes of self-defence because they are untrustworthy, but which fired point-blank and favoured by chance become deadly weapons in the hand of the murderer or suicide. Two recent crimes committed in London and prominently reported in the newspapers have again illustrated the need for regulating or for suppressing by the imposition of duties or otherwise a trade which endangers the lives of peaceful citizens while conferring no compensating advantage upon anyone. In the case of what has been dubbed the "Blackfriars tragedy" two lives were lost. The murderer killed himself on the spot; his victim lingered for many days but has now succumbed; and her husband, it has been stated, might have shared her fate had not something hard in his pocket or his clothing obstructed a bullet from the gimcrack weapon which had already wrought such dire mischief. In the "Leicester-square tragedy" one victim, again the one who fired the shots, has succumbed, while the other appears to be on the road to recovery, although shot in the body not far from the heart at close range. Instructive evidence has been given at the inquest in this case as to the purchase of the weapon. It was bought in Houndsditch for 5*s.* 6*d.*, and as there was evidence that the young foreigner who bought it was practically destitute we may infer that had the desired firearm cost pounds instead of shillings it would have been beyond his means, while the necessity for obtaining a ten-shilling gun licence before being allowed to possess it might have proved an insurmountable obstacle. In both of these cases murder and

suicide might, as we are aware, have been committed without firearms, but murder and suicide by poison, the bludgeon, the knife, or other possible agencies would have been far less easy, rapid, and certain. It is the cheap pistol which places the lives of ruler and subject alike in the hands of the criminal and the insane, whether those with murderous propensities be weak or strong, cunning or stupid, irresolute or determined, and the matter is one which deserves the attention of Parliament, to be bestowed irrespectively of party politics or of the complaints of individual constituents.

DIAGNOSIS OF SMALL-POX.

AT a meeting of the Johns Hopkins Hospital Medical Society held on May 20th, 1901, and reported in the September number of the *Bulletin* Dr. Otley J. Porter of Columbia, Tennessee, described an epidemic that has recently prevailed in that section of Tennessee in which he lives. For a time the diagnosis was in dispute, some regarding it as chicken-pox, others as a new sort of eruption—"the bumps"—and a few recognising it as true small-pox. Meanwhile, in the uncertainty there was no efficient action or isolation and the disease spread until there were 1000 cases. Dr. Porter exhibited casts of the eruption and threw pictures on the screen showing that the disease differed in no way from the small-pox of the text-books, there being cases of hæmorrhagic, confluent, semi-confluent, and discrete small-pox as in other epidemics. The mortality also was the same, all the hæmorrhagic cases (five or six), 40 per cent. of the confluent, and from 10 to 15 per cent. of the discrete dying. In the 1000 cases there were some 15 cases of the disease in the fœtus in utero, several of which Dr. Porter had himself delivered. In the subsequent discussion Dr. Fulton said that it was not surprising that errors of diagnosis had been frequent in the history of the small-pox epidemic prevailing in the United States, for the disease might depart widely from the text-book description, though not more widely than typhoid fever did, and these variations were no less manifest in its epidemic characteristics than in the individual cases. The medical student of to-day had no chance to observe the disease, and had therefore no mental picture of the disease other than that gained from the text-books. Comparatively few practitioners under 50 years of age had seen the disease, while the older men remembered it by the more impressive characteristics of its appearance years ago.

"VOLCANIC ACTION AS A CAUSE OF OUTBREAKS OF EPIDEMIC DISEASE."

UNDER this heading Dr. Noel Bardswell of the Deeside Sanatorium at Banchory, Aberdeenshire, wrote an essay which gained the Parkin prize of the Royal College of Physicians of Edinburgh in 1900, and is published in the October number of the *Edinburgh Medical Journal*. In 1851 Dr. John Parkin, from whom this prize derives its name, brought out a large work on "The Remote Cause of Epidemic Diseases," in which he took the view that volcanic action was to be regarded as a factor in the causation of cholera and other epidemic diseases. Speaking generally the countries most liable to earthquakes are Portugal, Italy, Beloochistan, Afghanistan, the Bengal Presidency of India, Japan, Mexico, and the Pacific coast of South America. Dr. Bardswell is of opinion that the presence of volcanic activity in a country as a whole has no obvious effect on the death-rate or incidence of epidemic disease, but there is an evident difference in this respect between the volcanic and the non-volcanic portions of such countries. He applies this argument to selected portions of the United States of America and to selected portions of Italy, but, as he himself admits, the results obtained in this way must be received with caution. It seems to him, however, to be not unlikely that volcanic action may have an effect on the mortality in towns possessing modern water-supply and drainage systems. Yokohama in Japan is situated in a district almost constantly under the influence of seismic disturbance and formerly had a very high death-rate from epidemic diseases, especially cholera and typhoid fever, but since the reservoirs and other water receptacles have been incased in puddle-clay and special precautions have been taken in the laying of the water-mains the health of the town has greatly improved. The methods adopted to guard against injury to the water service by earthquake shocks have been described by Mr. Turner in the *Transactions of the Institute of Civil Engineers*, vol. c. In 1887 a fairly severe shock of earthquake traversed the Riviera and did a great deal of damage. In addition to the destruction of houses, great cracks were made in cesspools and drainage-pipes were rendered leaky. In the three towns of Nice, Cannes, and Mentone the combined deaths from enteric fever were as follow:—41 in 1886, 66 in 1887, 115 in 1888 (the year after the earthquake), and 84 in 1889. The effect of earth tremors upon drainage and water-supply systems is, therefore, of much practical importance in certain localities.

BREAKING UP THE STREETS.

THE nuisance, the waste of time, the loss of temper, and the expense incident upon the fatuous way in which companies of various sorts—to say nothing of vestries or borough councils and the Post Office—break up the roads and footways have been well known to everyone for some time past. At last, however, there are signs that the hitherto patient worms, namely, ratepayers, are turning and the various articles and letters which have appeared in the public press are ominous of a gathering storm. Repairs and alterations are necessary, but what is absolutely unnecessary is the exasperating manner in which the blockage is made to be consecutive. We have a personal acquaintance with a certain street in South Kensington which recently for some 13 months was up in one portion or another. We have forgotten the exact order in which the various companies descended on their prey, but one after another came—electric lighting companies, hydraulic power companies, telephone companies both National and Imperial (i.e., the Post office) until the road and footways were impassable. Finally, the vestry relaid the paving of the footways. Scarcely was the mortar between the stones dry when they were all grubbed up again for the laying of pipes or wires. Undeterred by this the vestry next enclosed the whole roadway and with commendable promptitude relaid it with new wood blocks. Directly it was finished the owners of some new flats dug a trench from the middle of the roadway to the pavement for some connexions for electric light. The tradesmen in the street naturally complained bitterly, but no redress was obtainable. From a letter which appeared recently in a contemporary the same process is going on in Chester-square. And all over London the same idiotic want of organisation is apparent. A system of universal subways is perhaps utopian, and even were such a system possible gas, electric, and water mains could not be laid in the same tunnel for fear of explosion. But some relief from the present distress must be found. As we write, the Strand, which was relaid with new wood this year and which has only just recovered from a severe attack of electric-lighting company and Post Office, is a chaos opposite Agar-street owing to the operations of a water company.

THE Presidential Address of the Chelsea Clinical Society was delivered on Oct. 15th at the Jenner Institute by Dr. Charles Morris, C.V.O., the subject being "Some War Sequelæ." The address was an account of work done at home amongst sick and wounded officers from South

Africa and will be published in a later issue of THE LANCET.

DR. JUDSON S. BURY, physician to the Manchester Royal Infirmary, will give the Bradshaw Lecture before the Royal College of Physicians of London on Tuesday, Nov. 5th, at 5 P.M. The subject is "Prognosis in Relation to Disease of the Nervous System."

AN investiture was held at St. James's Palace on Oct. 29th when many gentlemen who have been awarded honours in connexion with the Army Medical Services in South Africa received their decorations at the hands of His Majesty.

THE GENERAL MEDICAL COUNCIL: ELECTION OF DIRECT REPRESENTATIVES, 1901.

TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

LADIES AND GENTLEMEN,—At the urgent solicitation of medical brethren in whose judgment I have confidence I beg to offer myself as a candidate for election to the General Medical Council.

I have been in general practice in Manchester 35 years, during which period I have held appointments as Poor-law medical officer, public vaccinator, and certifying surgeon to factories. I am a member of the Central Council and chairman of the Parliamentary Bills Committee of the British Medical Association and I am also a member of the Reconstitution Committee whose preliminary report was approved at the last annual meeting.

I think that the time is ripe for an amendment of the Medical Acts and in my judgment the most pressing requirements are:—

1. Reconstitution of the Medical Council.
2. Increased Direct Representation.
3. One one-portal system of entrance to the profession.
4. The punishment of practice for gain by unregistered persons.
5. The regulation of medical aid societies.
6. The registration of obstetric nurses.

I am strongly of opinion that the representatives of universities and medical corporations on the General Medical Council should be elected by their respective medical graduates and diplomates or that the number of Direct Representatives should be largely increased and that a system of district representation should be established.

The fortieth clause of the Medical Act of 1858 requires to be so amended that practice for gain, and not assumption of title only, by unregistered persons should be made penal.

Increased power should be given to the Medical Council so that registered persons who accept appointments in medical aid associations, which exploit the public at the expense of the profession by advertisements and touting, could be dealt with rigorously.

I am *not* in favour of the registration of midwives as independent practitioners. I have always advocated the registration of obstetric nurses whose functions should be strictly limited and upon whom nursing duties should be imposed. I think also that the work of these registered women should be conducted under medical control.

The minimum age at which a medical student can be registered should be 17 years, and a uniform system of entrance examinations, under the authority of the Medical Council, should be established. The five years' curriculum after registration of studentship should be rigidly maintained.

Mr. Victor Horsley is among those of my friends who have strongly urged upon me the duty of offering myself as a candidate at this election, and I much regret that Mr. Horsley is, owing to the wording of the Medical Act, unable to resign and offer himself for re-election at this time. It would have afforded me pride and pleasure to be associated in the candidature with a man who has rendered such splendid service to the profession. If you elect me I believe that I shall act in complete harmony and concord with Mr. Horsley and other Direct Representatives in promoting what I think to be the true interests of the profession—always the true interests of the public—and it shall be my constant endeavour to justify the confidence reposed in me.

Yours faithfully,

Old Trafford, Oct. 28th, 1901. S. WOODCOCK.

TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

LADIES AND GENTLEMEN,—As one who believes it to be essential that the General Medical Council should undergo some radical alterations and improvements, and who trusts that he is to a considerable extent qualified to assist in the proper carrying out of these modifications, I am coming forward as a candidate at the approaching election. The foundation of my claim is that I believe that the General Medical Council should be essentially concerned with the welfare and interests of the general medical profession and the safety of the public, and not, as at present, only with trying to reconcile the various selfish interests and jealousies of the different corporations and licensing bodies.

The constitution, procedure, and finances of the Council require thorough revision, and the members must directly represent the profession—not the restricted councils of each corporation. The present unfair treatment suffered by our Direct Representatives must be met by sending resolute men who will not flinch from asserting the wishes and interests of the general profession, no matter how bitterly the vested interests oppose; and in some instances this opposition has overstepped the limits of mere bullying and become absolutely illegal.

It is especially in such circumstances, and also in the necessary amendments to the Medical Act and other legislation, that I hope my qualification of barrister-at-law may be of especial service to my fellow practitioners; and as I now am, and have been for over 15 years, engaged in general medical practice, I trust that the profession will recognise that it would be to their interest to avail themselves of the services which I now place at their disposal.

I am, yours faithfully,

CHARLES W. HAYWARD, Barrister-at-Law, M.D. Edin., D.P.H. Cantab., M.R.C.S. Eng., L.R.C.P. Lond.

Liverpool, Oct. 27th, 1901.

MEETING AT BIRMINGHAM.

A large meeting of medical practitioners was held at Birmingham on Oct. 24th to hear an address from Mr. Victor Horsley, when about 120 attended at the invitation of the Birmingham and District General Practitioners' Union, a well-known and influential local organisation. The meeting was held in the large lecture theatre of the University, a fact which is evidence of a broad-minded spirit on the part of the authorities that might with advantage be imitated elsewhere. Mr. H. Langley Browne was in the chair and briefly introduced Mr. Horsley.

Mr. HORSLEY said that while there were many points requiring reform in the profession the outlook was brighter than when he joined the General Medical Council four years ago. Speaking of the question of contract practice, he earnestly warned the profession in any question of negotiations with the clubs to enter upon them only after the conditions had been defined. One such condition must be that of "wage-limit." The attitude of the General Medical Council was, he thought, very satisfactory on the question of contract work and medical aid societies. He desired as an example of this to allude to the Irvine case. By no means so satisfactory, however, as was shown in that case, was the attitude of the public towards the profession. No other learned profession nor either of the services would have been treated with the same indignity as the medical profession when the case of Dr. Irvine was mentioned in the House of Commons. That the Right Hon. J. Chamberlain should have insulted the profession by referring to their "trades-union" rules might be attributed to ignorance and faulty information, but that the medical Members of the House should not have made a better case was indeed surprising. The General Medical Council, in condemning Dr. Irvine, had in mind the flagrant advertising that was adopted by the Consultative Institute, and the medical profession had always exercised discipline in its own ranks, a thing he believed a trades-union never had done. Singular to relate, Sir W. Foster was the only medical Member to rise in the House when the honour of the profession was dragged in the dust, and even he did not explain the reason why Dr. Irvine was condemned for

"infamous conduct," but allowed the House of Commons to remain under the impression that the charge of infamous conduct was brought against Dr. Irvine simply on account of the lowness of his fee. No other medical man defended the honour of the profession and Sir Michael Foster even voted in the majority in support of Mr. Chamberlain. But what revealed the political impotence of the profession in the most striking light was the confession that Sir John Gorst was obliged to make, that although the General Medical Council was practically a department of the Privy Council, neither he nor the Duke of Devonshire had time to read the minutes. That, indeed, was "infamous conduct." But not only was the General Medical Council hindered in its work from above, it was also troubled from below. Recently the Colleges of Physicians and Surgeons, bodies with an ancient history but whose *raison d'être* had now disappeared and which were in financial low water, had disputed the ruling of the General Medical Council. They must be forced to give way. Mr. Horsley then referred to the question of reciprocity with Italy, and showed that in this matter also the Privy Council had entirely neglected the advice of the General Medical Council. The remedy for all these grievances was a new Medical Act, but he feared that the time for passing this was not yet. Meanwhile let medical men organise themselves into such bodies as the Birmingham and District General Practitioners' Union, and especially let them support the reconstitution of the great British Medical Association and their interests would no longer be neglected.

MEETING AT NEWCASTLE.

A meeting was held on Oct. 26th in the Library of the College of Medicine, Newcastle-on-Tyne, under the auspices of the various local medical associations, for the purpose of hearing the candidates for the forthcoming election to the General Medical Council. The summonses for this general meeting of the medical profession of the district round Newcastle were sent out by Dr. A. Cox of Gateshead and the various local medical associations must be congratulated on the results of his labour, for the number of medical men attending the meeting was about 100.

Mr. RUTHERFORD MORISON having taken the chair called on Dr. Cox to read some letters which had been sent to him.

Dr. COX said that he had a letter from Dr. Glover who was the only one of the candidates who had not been able to attend. The letter was dated Oct. 19th and said that Dr. Glover was sure it would be understood that it was a great disappointment to him to decline all public meetings, as it was always a pleasure to him to meet his constituents even when they met to debate difficult questions. The letter concluded with a particular request to Dr. Cox to make the unavoidable reason of his absence clear to the meeting. Dr. Cox said he had also had a postcard in which Dr. Glover was very anxious to impress on his constituents that nothing but sheer necessity prevented him from attending. After Dr. Cox had read the names of several medical men who regretted their inability to attend he proceeded to say that Dr. Charles Hayward of Liverpool had allowed himself to be nominated as a candidate for the General Medical Council, but that the committee had not known of his intention in time or an invitation would of course have been sent to him to speak at that meeting.

Mr. MORISON said that he need not tell them what that gathering was for. It was to hear the views of those whom they hoped were going to represent them in the General Medical Council. Some of them remembered that the very name "medical politics" used to stink, but at the present day they had come to recognise that the subject was of great importance. They saw that without combination any body of men were absolutely helpless in this present age. Unless there was some combination there was no one voice speaking for the medical profession. Being without combination the medical profession had gradually got to be heard less and less, and its opinions had come to have less and less importance. They had, however, roused themselves to this fact, and they welcomed those gentlemen who had come there to tell them what they could on medical matters. In addition to the services medical men owed to the public they had duties to themselves as a combined body and to themselves individually. Owing to the courage and the ability with which Mr. Horsley had taken part in the debates of the General Medical Council they had arrived at the definite conclusion that changes in the General Medical Council were very much wanted and that there were many things in its composition which would be better for being revolutionised. Mr. Horsley had taken a very active part in the work of the Council and they hoped for great things from him in the future. He would first ask Dr. S. Woodcock of Manchester to address the meeting.

Dr. S. WOODCOCK (Manchester) said it was a great pleasure to him to meet so many medical men in the north. He thought that they were beginning to regard the General Medical Council as a sort of medical parliament and to take an interest in the election of the Direct Representatives. Unfortunately there was no doubt that there was considerable apathy in the profession generally concerning medical politics and he was delighted to see so many medical men assembled there in Newcastle, especially on a Saturday afternoon. In Manchester a Saturday afternoon would have been the very worst time on which they could have hoped to get together a large meeting, for in that district they were somewhat strict Sabbatarians, and they got as much work done on the Saturday as possible so as to relieve themselves on Sunday. Dr. Woodcock, continuing, said that his view with regard to the General Medical Council was that it was lacking in the qualifications which he thought a Council affecting to provide for the interests of the public and the profession ought to have. Its constitution was, in the first place, such as to make it unlikely that it would take any very great action on its own part for reform. It was a sort of compromise which was effected because the medical corporations could not agree among themselves. He remembered that the Apothecaries' Society was not anxious for any reform which would deprive them of any of the monopolies that they enjoyed, and that was also the case with the Royal College of Surgeons of England; the Royal College of Physicians of London was jealous of the rising influence of the London University. In consequence a body was formed which was representative, in the first place, only of the medical corporation and their representatives were men not elected by the graduates or diplomates of those bodies, but by small coteries, the result being that they constituted a Council which was in no sense a representative body. Some years after the constitution of the General Medical Council they procured an amendment of the Medical Act which gave the profession a very few Direct Representatives which was a miserably inadequate concession to the demands of the profession. He, however, did not hope for very much reform from the General Medical Council; he did not anticipate that it would do much to encourage reform until the Council had been reformed itself. In the first place the Council should make a recommendation to the Privy Council that the number of the Direct Representatives should be increased as far as possible. While doing that it should be suggested that they should have a topographical arrangement for the election of the Direct Representatives. It was bad enough for those men living in the North of England as he was described as doing to have to travel 150 miles to meet his friends in Newcastle, but the candidates from London had to travel double that distance, and Mr. Jackson from Plymouth three times as far. If medical men were to be induced to take part in the elections of the representatives they should be afforded a fair opportunity of seeing and hearing those gentlemen who aspired to represent them in the General Medical Council. If he (Dr. Woodcock) was only obliged to appeal to those medical men resident in the north—as, for instance, those in York, Leeds, and Bradford—it would be possible for him to make their acquaintance and personally to make his views known to the men in those thriving places. Dr. Woodcock then proceeded to point out that there appeared to be a disposition on the part of one or two Royal Colleges to be in dispute with the General Medical Council with regard to the question of the preliminary examination. He thought it was a point of the utmost importance, though he was uncertain himself whether the General Medical Council had much influence over preliminary examinations. He considered that they should see to it that those who were entering the medical profession should have a good sound education, as he believed that the want of such preliminary training was to some extent the reason why the profession was not held by the general public in such respect as perhaps it ought to be. At the last Council meeting of the British Medical Association they passed a series of resolutions concerning this question of preliminary education and he would like to read them to the meeting and to say that they represented

very accurately and very faithfully his judgment on this matter. The resolutions were proposed by Dr. P. Maury Deas of Exeter and were seconded by Dr. E. L. Fox of Plymouth. The first was that it was undesirable that anyone should be registered as a medical student until he or she had attained the age of 17 years. The next was that the standard of the examination in preliminary general education required by the General Medical Council should be suitable to candidates of 17 years of age of average intelligence and reasonable industry. The third was that the present system of multiple examining boards was most undesirable and that it was necessary in order to secure uniformity of standard that a single examining board should be appointed by the General Medical Council and that this board should hold its examinations as often as necessary at multiple centres simultaneously. The fourth was that the examination should include at least Latin, mathematics, English grammar, literature and essay writing, history, geography, and either French or German. The last was that a committee of the Council be appointed to consider the whole subject of preliminary general education and the best means of promoting the carrying into effect of the foregoing recommendations, and to report. He thought that those were most desirable resolutions and it was greatly in the interests of the public that they should be passed. They saw that they were in some respects fighting for the very reforms which the early medical reformers were fighting for more than half a century ago. There was the necessity of having a one-portal system, for they had about 20 qualifying bodies. There was the necessity of having an amendment of the Medical Acts under which they could punish a man for practising without being registered. At the present day they found men practising with impunity unless they assumed medical titles. The General Medical Council had no control over unlicensed people. The General Medical Council had practically abolished the unqualified assistant and they did it by getting at his principal. They said, We shall punish you if you employ an unqualified man. It so happened that a man had an unqualified assistant who was a very sharp fellow and when the decision of the General Medical Council was issued the assistant was asked what he was going to do. "Oh," he said, "I am going to continue practising; I shall not call myself a surgeon but I shall practise all the same." That man was still practising, and such a thing was quite possible under the Act as it now existed. A surgeon was prosecuted for a criminal offence and was imprisoned for 12 months. When that man came out of prison he put his name up and practised with such a success that might excite envy, for he left £50,000 to a university. That was, he thought, an illustration of the fact that the present law only took cognisance of the assumption of medical titles and in reference to that he was speaking to a Member of the House of Commons one day when he was up in town on another question in connexion with medical reform. He was talking to this Member about the prescribing druggist and he was told that it was not possible to touch him because one half of the Members of the House of Commons would not hesitate to go into a druggist's to have a pick-me-up as they went along. They would see that that was one of the difficulties under which they laboured. The time, however, was ready for some reform to be effected and it would be no less in the interest of the general public than in the interest of the profession. He (Dr. Woodcock) thought they ought to hold on like grim death to the five years' curriculum and he thought that five years was quite short enough time for any young fellow with a good preliminary education to lay hold of the knowledge which was necessary to embark him in the world as a practitioner of medicine. Now there was a question which perhaps excited a good deal of interest lately—that was the question of medical aid associations, and they had rather a striking illustration of the ability of the consultants to deal effectually with a man when he trod on their corns. He referred to the case of Dr. Irvine at Birmingham who was connected with a sort of medical aid association and who began practice as a consultant of that association. He had never seen such a fluttering among the pigeons as there was in that affair, but he would remind them that the very same sort of thing had been going on, though with men of smaller calibre. When brought before the General Medical Council they made short work of Dr. Irvine, but the issue of that affair revealed that the General Medical Council did not stand high in its relations with the Government, for in the debate in Parliament on the appointment of Dr. Irvine as one of His Majesty's inspectors of schools Sir John Gorst, representing the Government in the House of Commons, said with a sort of scorn that he did not read the minutes of the General Medical Council and was not acquainted with what went on in the General Medical Council. Neither his noble friend, the Lord President of the Council, nor he himself had sufficient leisure to acquaint themselves with the proceedings of the General Medical Council. And that body, continued Dr. Woodcock, was supposed to be the one which was charged with the responsibility of advising the Government in regard to medical matters. It revealed the fact that the General Medical Council was a subordinate body which was under the control of the Privy Council. It only required two members of the Privy Council to veto any action of the General Medical Council. He did not know what could be done; he had no hope except by a general rising of the medical profession as one man against that sort of thing. They often wondered how it was that their forefathers were able to stand the condition of things before the reform of Parliament, but they had now at the present day an enormous constituency of educated men with many of them contented to remain under the conditions which he had described. He remembered a president of one of the Royal Colleges saying at a meeting of the British Medical Association when there was an agitation going on for reform that he did not think that any reform of the Medical Act of 1886 was wanted—it was a very perfect Act and there was nothing more to be desired. In fact, he considered that they were in the best of all possible worlds and under the best possible conditions. But the individual opinion of that particular person did not apply, for they had reason to complain that after all the money they had spent and the time and energy they had expended in equipping themselves to become registered practitioners they should get no further protection from the State than that of their title. In regard to medical aid associations he knew that the General Medical Council had no thought of power to issue an edict prohibiting men from accepting situations under these medical aid associations, but they had one power, and he believed they would exercise that power, and he thought he could trust the General Medical Council as long as Mr. Horsley was there to exercise it, and that was that if local organisations could get up a concrete case and give proof that any man had been acting for a medical aid association which touted and advertised then he believed that man could be dealt with by the General Medical Council. It was a shame that they had to do things in that way, but he believed that it was only in that way that it would have to be accomplished. Coming next to the question of the wage-limit Dr. Woodcock said that Dr. Glover seemed to be enamoured of what he called a conciliation board. Personally he did not mind a representative of the medical profession going on to a conciliation board to meet men who would meet their representatives in a conciliatory spirit. They had lately had some curious experiences in regard to this conciliation board. Dr. A. Cox was on a committee of the British Medical Association which met the representatives of the friendly societies, to whom it was said that in the first place it was necessary to have a wage-limit. But this demand was definitely refused and the friendly societies said, "We will not have a wage-limit." It appeared that

> "The good old rule
> Sufficeth them, the simple plan,—
> That they should take who have the power,
> And they should keep who can."

What was the good, Dr. Woodcock asked, of the medical profession being represented on a conciliation board with men who were so entirely unconciliatory? Such a course of action would be simply giving the profession away until the representatives of the friendly societies came into a more reasonable spirit. In connexion with the wage-limit he recounted how a man came to him in Manchester last week who boasted of being a wealthy man and said that he only came to Dr. Woodcock when he was seriously ill, as a general rule going to his club doctor. On being expostulated with and told that being a man of wealth he ought not to take advantage of a club, he replied that that was all nonsense: he paid his money to the club and he ought to have something for it. Dr. Woodcock said he only mentioned that incident in order to illustrate to them that it was necessary that they should have some distinct understanding in

regard to the wage-limit. He would just say in passing with regard to the finances of the General Medical Council that Mr. Horsley had revealed that these were not in a very satisfactory condition. The branches of the Council had been living on the capital, and the Irish Branch Council had been going beyond that and had followed the advice of Artemus Ward, "Live within your income even if you borrow money to do it with." That was not a very satisfactory condition of affairs, and if the General Medical Council was to be a potent instrument strong enough to effect the purposes for which it had been constituted then it should have sufficient money. He could not escape, after serious thought, from the conviction he had that it would be a good thing for the medical profession if they had to subscribe an annual fee. If that were done the money would be provided and, reckoned at £1 a year for each medical man, would amount to about £35,000. Anyhow, that or some similar sum would have to be provided and it was certainly most unsatisfactory that the General Medical Council should be allowed to have its affairs get into a financial muddle. He thought that the penal powers of the General Medical Council ought to be modified: they had no punishment but a capital one, they could do nothing with a man but cut him off the Register. There might be conditions under which a man might be suspended so that he might be under observation as regards his conduct or he might be called upon to get some one to stand surety for him. He considered that there ought to be a little more elasticity about the law in regard to the punishment of men for infamous conduct in a professional respect. It would be desirable to have the penal powers of the Council so modified as to enable them to deal with some measure of justice with men proved guilty of the less serious professional offences. He was heartily tired of the midwives question, for after years of work they were still going on in the profession with a sort of internecine war. The battle went on week after week in the press. There were men on the one side who said that you should do this and there were men on the other side who said that you should not. He thought, after all, they would be obliged to look facts in the face. His position was this—that if they could secure a system whereby midwifery nurses could be registered, their functions limited in a decided and distinct manner, so that they could be punished for any encroachment, and if they had nursing duties imposed on them, and were placed under medical control as far as possible, he thought they should have come to something which could be accepted as an instalment. It would be tentative—all Acts of Parliament were tentative; but if they had to wait for something perfect it might perhaps come in his time or it might not. He was not in favour of registering midwives as independent practitioners. He believed that it was possible that a system of medical control could be arranged to prevent that and he would like such a scheme to be arranged for the satisfaction of everyone. It was a very difficult question. There were a great many men who were opposed to them, not from sordid reasons, but because they honestly thought that the alternative plan was in the interests of the community. He gave them credit for thinking uprightly on the question, but the time had come when they themselves should form a conciliation board and by means of that arrive at a practical solution. Burke said that compromise was not seldom the wisest course in politics, and nearly all the Acts of Parliament under which they lived and by which they were governed were the results of compromise. This internecine warfare over the midwives stirred up bad blood and created ill-will, for there was always a short way with those who dissented which was somewhat a peremptory one, for it was no argument to say, "Damn you, sir, I do not agree with you." He sincerely hoped that something would be done which would satisfactorily deal with the matter. By the ruling of the chairman each speaker was limited to 20 minutes, but Dr. Woodcock said if he might be permitted one word more he would like to say one or two things which were not altogether impersonal. They did not know there in Newcastle, and he wanted to tell them, that he did not want himself to go on to the General Medical Council because of the honour which it would confer on him. He had had more honours conferred on him by his medical brethren than he deserved. He had been President of the Clinical Society in Manchester, President of the Medico-Ethical Society, and President of the Lancashire and Cheshire Branch of the British Medical Association. He was a Member of the Council of the British Medical Association, and he was Chairman of the Parliamentary Bills Committee, and for years he had been engaged with Mr. Horsley in attempting to secure medical reform by working on sub-committees under the auspices of the British Medical Association. He had been lately assisting in the attempt to reform the constitution of that Association and he hoped that if that were effected they would find the Association to be an instrument through which they would exert pressure and operate not only on Parliament but also on the country at large. The time would soon come when they would find that those of them who were charged with the safeguarding of the health of the community would have some right for consideration at the hands of the community for whom and in whose service they spent their lives.

Mr. GEORGE JACKSON (Plymouth) said he was pleased to come there to express his views on those questions that were likely to arise in connexion with the General Medical Council. It was especially gratifying to him to see so many present at that meeting and it rather contrasted with the numbers at other meetings that he had attended. It looked as if the men at Newcastle took an interest in medical politics and that was a good sign because one of the great difficulties they had to contend with was the apathy of the medical profession. He believed that on the last occasion of the election to the General Medical Council only about one-third of the medical men voted on the question as to who should represent them in the Council. If people would not take any care of their own affairs they could not expect Jupiter to help them. It was quite certain that Parliament would not listen to representation unless there was a strong body of opinion expressed by the profession in a certain direction. He would like to refer to his address. In the first place, there was the reform of the Medical Acts so as to provide for direct representation of the medical profession in every case except the Crown nominees. In order to reform the Medical Acts they would have to reform the General Medical Council itself, and of course, as they knew, the members who represented the corporations were in such an overwhelming proportion and so outnumbered the Direct Representatives that nothing could be done as it should be done owing to the dead weight against them. He hoped that whoever were elected as Direct Representatives would act in unison, because that seemed to have been wanting during the last five years—in fact, there seemed to have been almost antagonism. To arrive at reform they must endeavour to secure more Direct Representatives on the Council. There were two ways in which that might be done: they might do it by reducing materially the representatives of the corporations, and he suggested that the corporations should be arranged in groups with a representative for each. In that way there would be an opportunity for increasing the numbers of the Direct Representatives, and in addition to that the members who represented the corporations should be directly elected by the members of those bodies. He took for instance the Royal College of Surgeons of England as it stood at the present time. It was a grievance that Members of the College had not the slightest voice in the College affairs and possessed no vote. He said that all the Members should have a right of voting because they were Members of the body corporate. The Members should have a right of voting for the representative of the College on the General Medical Council and the same was the case with the other corporate bodies. If they were reformed then other things would follow. In the second place he had said in his address that the standard of entrance examinations should be raised and the age of entrance limited so as not to be under 17 years. The resolutions which had been read by Dr. Woodcock as having been considered by the Council of the British Medical Association were first passed at a meeting of his own branch of the British Medical Association which was held in Devonshire. When Dr. W. Gordon of Exeter brought them forward he wanted to add the subjects of physics and chemistry, but the others thought that it would be better to leave these subjects to a later period. He did not think that the brain of a lad 16 years of age was capable of fully profiting by the proposed instruction. It had been, however, objected that at 16 years of age a boy could pass any of the examinations proposed. If there was a uniform examination such as was suggested any boy 14 years of age might pass it and then would waste his time till he was 17 years of age. Mr. Jackson, however, pointed out that in such a case a boy should be compelled to show evidence of having done work meanwhile,

as, for instance, at some technical school. The third point in his address was that the one-portal system of entrance should be secured by forming a board of examiners composed of delegates from the present examining bodies. It was important to have the one-portal entrance into the profession and one portal for the purely professional examination. It might be something in the constitution of English people, but they seemed rather to like to do things in an odd sort of way. They did not favour the idea of uniformity. In France and Germany they had one State examination which everyone had to pass. After passing that they could take any ornamental university degree that they pleased. In England the idea of freedom prevailed, but in the end they would have to come to the one-portal system. The General Medical Council was composed of such a number of representatives of corporations that it was not likely they would consent to the system, but it had occurred to him that it might be brought about by all the present bodies that examined sending delegates to a board of examiners so that everyone would have some finger in the pie, everyone would get some plunder out of the arrangement, and then the method of uniform examination might be instituted. Again, in any legislation for the reforming and alteration of the Medical Acts it was desirable that the Council should have power to suppress quacks who practised medicine and surgery under various forms of colourable pretence. Nothing could be done with the class of opticians and others under the present Act unless a man professed to be registered or called himself a surgeon or physician. The lawyers were much more careful of their own interests and if any man made a colourable pretence of being a lawyer or if a debt collector wrote a letter to anyone in the form of a legal document to collect a debt the lawyers were down on him and he soon found himself in a wrong position. In his opinion the General Medical Council should have a great deal more power in that direction. He considered that a more definite pronouncement should be made against medical men acting as medical advisers to clubs and insurance societies whose agents touted for members. The matter had become of late a very serious evil and Mr. Jackson described how the insurance companies tried to bribe people into joining. Their agents would say to a man that he could join as a sick member and could have a medical man—of course, adding that he was a very good medical man. These agents also did not care how well off the people were who were to become members, the matter of the insurance was all that they cared about. At Plymouth they had attempted to cope with the evil; they had not appealed to the General Medical Council because there was no use in doing that, but they had applied to the Colleges which had licensed the medical men who were acting as medical advisers to these insurance societies. They found that the Irish Colleges were willing to take cases up and would write to the medical men to say that if they continued in that sort of action their diploma would be withdrawn. Mr. Jackson then came to the point that the General Medical Council ought to have supreme power in matters of general education. There was a sort of deadlock between the Royal Colleges of Physicians of London and Surgeons of England and the General Medical Council in regard to the five years' curriculum. The Royal Colleges were losing their candidates for their diploma, so they said, that the candidates might attend the first of the five years' curriculum at one of the higher grade board schools or technical schools. The General Medical Council said that the five years should be spent in a medical school, but they had no power to say to the Colleges that they must do as they told them. The Colleges could defy them, but in a new Act a clause should be put in giving the Council powers. He then came to what he had referred to as the burning question of the time—the midwives question. He thought Dr. Woodcock had said in a former speech that they had always had the midwives; but they had always had many people who were not desirable, and he thought if they could they ought to try to extinguish the midwives. Why should they always have these Sarah Gamps? Every medical man knew what an extreme danger they were, what an enormous number of deaths they caused, and every now and again they saw reports of the carelessness of these women. England was a free country, but it was going too far to allow these people to endanger the lives of those who were most important to the country. The population of England was not increasing as it ought to, and it was necessary that the mothers of the country should not incur these dangers. He thought they ought to try to extinguish these Sarah Gamps altogether. He thought he was right in saying that the Bills which had been introduced into Parliament had laid down that any woman who had been in practice as a midwife for two years should be entitled to be placed on the Register. He protested against this right being given to any dirty woman who happened to be a midwife, and contrasted the proposed law with the provisions of the Medical Act on the construction of the Medical Register. He thought that the striking out of the clause might be a little hard on some of these women, but if they registered them they would at once assume other duties of a more important character. He thought it was very desirable that the question should be settled, and if it were possible a Bill should be introduced into Parliament to register all nurses who had had a sufficient training, that is to say, a three years' training, and the nurses who took midwifery cases should be under the control of medical men. For many years the Government had insisted on the guardians of the poor providing medical assistance, but they did not insist on their providing nurses except in the case of workhouses and infirmaries. It was a sad thing to treat midwifery cases in the homes of the poor—nothing was done that should be done, there was no cleanliness, and he thought it was very desirable, if nurses were provided, to see that treatment was properly carried out under the immediate control of medical officers. He had been told at a meeting at Liverpool that that course was followed at Saddleworth, but if the guardians did it they did it as an act of grace. He did not think it was possible for them to meet the promoters of the present Midwifery Bill because their views were so different. One of their views was that it would give more employment to women and that was one reason why they advocated that Midwives Bill. Another thing was that many people liked to be charitable at other people's expense and there were many ladies who liked to be philanthropic without cost to themselves at the expense of the medical profession. It was, of course, very easy to be philanthropic when it cost nothing. In regard to the clubs he was not a believer in the conciliation board that Dr. Glover thought would be of so much value. He found that it was the opinion of all medical men with whom he had spoken that the working man would not listen to the question of wage-limit. They would not entertain that point at all, so he could not see that it was any use entering into the matter with them. In those places where the working man would not make any concession the best plan for the medical man was to provide provident dispensaries run on proper lines. They had a small one in Plymouth run in that manner, the management of which was in the hands of the local branch of the Incorporated Medical Practitioners' Association. They had a wage-limit and the system worked well. If the management of a provident dispensary was in the hands of those who were doing the work, as, for instance, in the hands of the council of medical men of the local branch of the Incorporated Medical Practitioners' Association, he did not see that there could be anything which would go very wrong in the matter. If, however, the management were to get into the hands of a lay committee they would exploit the medical men. At Coventry there was a large dispensary to which half the population belonged and the staff would not do anything to endeavour to abate the evils in the system. He supposed they were afraid of losing their appointments and the committee would not submit to any inquiry as to the amount of wages earned. They said that they did not allow touting, but if a sick man wished to join it was possible for him to do so by getting two healthy persons to join with him, and Mr. Jackson explained how that was nothing else but touting. They had had two or three attempts at the meetings of the British Medical Association to have the matter dealt with, and the men concerned had been remonstrated with, but without avail. If the General Medical Council would pass a motion that it was infamous conduct in a professional respect to act in that manner it would be easy to deal with it. The men could then say that they could not do that sort of thing because the General Medical Council would strike them off the Register, and then the committee would have to give way and submit to a wage-limit. He (Mr. Jackson) was asked the night before at Liverpool to say how he would introduce a Bill into Parliament dealing with medical matters and his answer was, "Through the British Medical Association." The Association was in course of reconstruction and the system of delegation was going to be tried. The first meeting was to be at Manchester, and if the Bill was formulated by the Council of

the Association and thrashed out by the delegates there would be no difficulty in getting such a Bill into Parliament. The Bill would be the means of educating Members of Parliament in regards to medical matters and without that they would get nothing done because Members of Parliament did not care unless pressure was put upon them. What they said was that no one ever wrote to them about medical matters, and unless they all individually took the trouble to put pressure on the Members of Parliament the legislation they sought would not be secured. Mr. Jackson concluded by thanking the meeting for the kind way in which they had listened to his remarks.

Mr. GEORGE BROWN (London) said that before leaving town for the north-west to meet his constituents he took the advice of a well-known and most enthusiastic medical reformer as to the line which he should take in addressing those among the medical practitioners who did him the honour of coming to hear from him an account of his stewardship. His friend said that he did not think he could give him better advice than as follows: "When you go north tell them what you promised to do if elected and then go on to state how far you had endeavoured to carry out those promises, and, thirdly, as to what you should aim at in the future if it met with the pleasure of your constituents to re-elect you to go back to the General Medical Council." He thought that was very sound and proper advice, and he would have followed it most closely were it not that during the preliminary stages of the contest he had been met with some attacks of a personal character, and he felt from what had taken place at Liverpool that it was only right that he should address them on some of the personal points connected with his position in the General Medical Council. He had not expected to have to do this, but when he was attacked—and attacked unjustly—he thought that it was his bounden duty to reply to any attacks of that kind. The attacks he referred to he need scarcely dilate upon to those who were present at the meeting at Cheltenham. They would remember that those who had announced themselves to be candidates for the next election to the General Medical Council were asked to address the members of the British Medical Association at a morning meeting upon the matters connected with the General Medical Council. It so happened, taking, he supposed, the candidates in alphabetical order, that he (Mr. Brown) was called upon to be the first speaker. He said, then, that he would avoid personalities and he carried out his promise, but Dr. Glover who followed him made an onslaught on him which took him very much by surprise. However, the exigencies of the meeting did not admit of the chairman allowing him an opportunity of giving an explanation of the charges brought against him and therefore he reserved his remarks on them until he came on some public platform so that he could repudiate those charges concerning his conduct. As an old friend of his he had loyally supported Dr. Glover on many occasions and he was exceedingly sorry that he had not an opportunity of meeting him there on that occasion to refute those charges. Those of his audience who had read the medical journals might perhaps remember that the charges were of such a grave character that one of his strong supporters at the last election, now resident in Liverpool, stated that if the charges were true Mr. George Brown was no longer a fit and proper person to represent the profession on the General Medical Council. It was those charges that he would ask the indulgence of the meeting to discuss, and when he had met them he felt sure they would acquit him of everything like dereliction of duty in regard to the matter. He must remind them of what occurred at the Cheltenham meeting by reading from the report to them. Referring to the Midwives Bill and the granting of the so-called diplomas to midwives, Dr. Glover said, according to THE LANCET—a journal with which Dr. Glover had been connected for many years, and he (Mr. Brown) thought they might consider it a true report—Dr. Glover said: "Some gentlemen think that we should punish the leaders of the Obstetrical Society of London, and we have only one punishment and it a capital one, that we should remove their names from the Medical Register. Does any gentleman think that the most advanced medical reformer—Mr. Brown himself say—would venture to rise seriously and make a definite proposition to that effect in the General Medical Council? To do Mr. Brown justice I must say he has had the chance of doing this any time in the last five years and he has not done it." That charge almost took his breath away because he had a sort of dim recollection of having done it, although Dr. Glover appeared to have forgotten it, and in that matter he thought Dr. Glover's memory must have failed him entirely. He did not think Dr. Glover would have knowingly made such a grave charge as that and he must have forgotten a circumstance which occurred on Nov. 29th, 1899, 18 months before he made this charge, and which was also reported in THE LANCET. The report stated that:—

> The first business on the agenda was the following notice of motion by Mr. Brown—namely: 1. That notwithstanding the resolution of the Executive Committee passed on May 27th, 1896, the Registrar be instructed to inform the President of the Obstetrical Society of London that the Council can no longer assent to the holding of examinations in midwifery or to the granting of certificates of proficiency in the practice of that art by any body of persons unless invested with legal authority to hold examinations and grant certificates in this branch of medicine. 2. That the Registrar be instructed to insert notices in the leading medical journals to the effect that on and after the first day of January next any registered practitioner who takes part in any examination in the art and practice of midwifery or any other branch of medicine or surgery held by or on behalf of any society or person or body of persons, unless legally authorised to hold such examinations and grant certificates of proficiency to successful candidates, will be liable to be adjudged guilty of infamous conduct in a professional respect and to have his or her name removed from the Medical Register.

What became, then, of Dr. Glover's charge in the face of that—that he (Mr. Brown) had never taken any steps whatever to induce the Council to regard those actions as infamous conduct in a professional respect? He considered that what he had read was a sufficient answer to the charge. He might say that he was supported on that occasion by his colleague, Mr. Victor Horsley, who made a strong speech in seconding those motions of his. He (Mr. Horsley) seconded them and further stated, though he did not know whether Mr. Horsley remembered it, that "they must all have the utmost sympathy with the society in instituting this examination in the first instance, but while that was so they could not but feel that they were mistaken in issuing the certificate of any kind which, as the resolution of the Council said, was a colourable imitation of a diploma. He submitted that the present certificate contravened the spirit of the Medical Acts and was calculated to deceive the public." Dr. Glover in his speech, which Mr. Brown said was of course against the motions, asked if he (Mr. Brown) would strike off from the Register Sir John Williams, Dr. Champneys, and Dr. Cullingworth for issuing these certificates. Mr. Brown said he certainly would, and he would treat Sir John Williams and any others, high as they might be in the medical profession, the same as he would the latest addition to the medical profession if he should do an illegal act contrary to the letter and also to the spirit of the Medical Act which they lived under, and if he should continue to do it after he had been warned he would deserve to be struck off the Register. He (Mr. Brown) thought that it was a position that every medical man who had his profession at heart would agree to. The next charge, Mr. Brown said, that Dr. Glover had brought against him was more serious because it affected a question which touched them more closely, and that was in regard to the motion which he brought forward concerning the medical aid associations whose agents canvassed from house to house for patients. He had received in regard to the midwives question many communications but he had received a far greater number regarding the sweating of the profession by the medical aid societies, in the proportion of three or four to one. The charge which Dr. Glover brought against him was practically that he brought forward before the General Medical Council matters upon which he could not get a seconder—matters which laid him open to ridicule, as if the members of the Council said, "Oh, Brown again, Brown again," and then dismissed the affair. It was true that he (Mr. Brown) brought forward a motion referring to the medical aid associations concerning which Dr. Glover said at Cheltenham: "Mr. Brown tried to counsel the Council to do something more drastic and did not get a seconder." Mr. Brown said that he had been in correspondence with many local medical societies in various parts of the country, including the district of Newcastle, and he had been urged to lose no time in bringing that matter before the General Medical Council. The Middlesbrough Medical Society were memorialising the Council that it was felt that the holding of appointments under such medical aid societies as were referred to was derogatory to the profession, and if the Council did not discountenance the practice it would

very seriously affect medical men who had resigned appointments connected with such societies. Mr. Brown accordingly proposed at the meeting of the General Medical Council on June 11th, 1901, that

Notices be published by advertisement and otherwise to the effect that association with medical aid societies and clubs which systematically canvass for patients will be regarded by the Council as infamous conduct in a professional respect, rendering any practitioner proved to be guilty thereof liable to have his name removed from the Medical Register.

Mr. Brown said that any person with common sense would recognise that in an administrative body of 31 members all sitting there sent as representatives to represent such a learned profession as medicine, to maintain its honour and dignity, that out of those 31 members if one of them proposed a motion which he thought was conducive to the best interests of the profession and could not out of that body get a seconder, that man must be a crank and that he must be doing something not to the interests of the profession. He (Mr. Brown) had proposed that motion in fulfilment of a mandate from his constituents. It was a motion that had been discussed in London by the Council of a recognised institution and he had brought it to the General Medical Council and he had hoped that out of that body there would have been someone who would have supported him in saying that that was a desirable motion to carry. He was not ashamed of the fact that he could not get a seconder, he could only say that he was sorry he was unable to do so. He believed that the time would come when that motion would be proposed at the General Medical Council and would meet with a seconder, and he also believed that that motion would be carried. That motion, however, would not be carried if the medical profession left it only to Mr. George Brown and Mr. Jackson if they were elected, but it would have to be carried by the profession themselves putting their shoulders to the wheel and sending up memorials to the Council and giving them to understand that they were seriously intent on the matter. He trusted that they would agree with him that that motion must be brought forward again, and he hoped that it would meet with a seconder and supporters. He was confident that it would not be thrown up to him by his colleagues again that he proposed motions which he could not get a seconder for and thus brought direct representation into contempt. As long as they instructed him to do those things he would do them. He had no personal interest in medical aid societies because he had not had anything to do with clubs for more than 20 years. He was one of those who did not believe in conciliation boards in any matter between a medical man and his patient. Such boards were a delusion and a snare and would only land them in disgrace and difficulty. They could only settle that matter by working in unison; by being true to one another they could carry out their club practice and contract work without any assistance from any Conciliation Board of the General Medical Council or any other body. As to what he (Mr. Brown) had promised last election it would not be necessary to dilate upon it because most of those present belonged to that district and were ardent reformers—at least, they were more ardent than those in other parts; at any rate, he got more letters from the north which were of assistance to him than from elsewhere. The position was one of extreme difficulty; the Direct Representatives only numbered five out of 31, and all that they could do was to keep pegging away. The points that he alluded to in his address at the last election were about five in number. One was that he would do what he could to reform the Medical Acts. They had not been able to carry a Medical Reform Bill, but that he hoped would come. It had been impossible to get the General Medical Council to take any action in that matter. It must be done by a great organisation such as the British Medical Association, and it must be put before the House of Commons and well supported and then they would have a Medical Reform Bill. But he was afraid that they would not get all they required; he did not think that the Government would give them such stringent powers as they would like to have in order to stop unqualified practice, or such powers as the public ought to give the Council for their own protection. They had stopped the practice of the unqualified assistant, and in his experience of 30 years as a reformer he had found that the mill for turning out unqualified practitioners was the use of unqualified assistants by practitioners. When an unqualified assistant was discharged he, having so many patients who knew him in the villages and towns about, felt that he could practise on his own account and so developed into an unqualified practitioner, and that is how they had been manufactured by the score all over the country. By preventing the use of the unqualified assistant in visiting, &c., the Council had done a great deal to stop unqualified practice. In regard to preventing sick clubs and dispensaries from canvassing he had told them how he had been supported, and he could only regret that he could not report any good results except a pious resolution which had not done much. His friend, Dr. Woodcock, had just stated that if local practitioners would get up a case and present it to the Council and prove it the Council would take drastic measures as they did in the Irvine case. But he (Mr. Brown) did not think that it was at all a proper thing to ask medical men who paid a registration fee to the Council to be asked to take such a course. It was not right to ask medical men to go round making up cases against their local brethren after the manner of a detective. It was the duty of the Council to issue such regulations that that evil from which medical men suffered should be put a stop to without forcing them to adopt such a course as had been suggested. If the object could be gained by the issuing of an order from the General Medical Council that these appointments must not be held by medical men the whole business would be settled. They had just been told in regard to the Midwives Bill that they must come to a compromise, that they must give away something. He (Mr. Brown) did not believe in compromises: the thing was right or it was wrong. If it was right that these midwives should be registered as practitioners of midwifery they must let them be registered as practitioners, for midwifery was a branch of medicine and was within the four corners of their Bill of 1886. He said that it was their duty to themselves, to their profession, and to those who followed them to retain that charter unbroken. Why should they cut off the practice of midwifery and say that the midwives might practise that branch of medicine? Dr. Woodcock said that they should do it because midwives existed, but bone-setters and herbalists existed and counter-prescribers also. We should have no persons registered who were not properly educated to practise the whole range of medicine as well as any branch thereof. It was no unreasonable thing to ask the House of Commons to maintain the Act of 1886 intact. Referring to the question of geographical representation Mr. Brown pointed out that at the last general election Mr. Jackson was a candidate in the south, Dr. Rentoul in Liverpool, and he himself in London. He and Dr. Rentoul were honoured by being returned. Mr. Jackson was not, but received over 4000 votes. The principle of geographical representation was thus recognised at that time. It came with bad grace from Manchester to say that they were not represented topographically because the Lancashire and Cheshire Branch met when Dr. Rentoul of Liverpool resigned his seat and selected another member of their branch as their nominee to succeed him—viz., Mr. Horsley, although resident in London. He was glad that Mr. Horsley was selected because he had been a tower of strength to them. The only thing he would have liked to have further was for Mr. Horsley to be a general practitioner and if he were one they could not possibly have a better representative. Before leaving the question of topographical representation he would say that when Dr. Rentoul resigned he (Mr. Brown) felt sure that no one in the south would have stood in the way of Dr. Woodcock's election had he been selected by his branch instead of Mr. Horsley. Now when there were only two seats vacant it was not treating the present representatives fairly to put forward the principle of topographical representation. He had fought for them for 15 years and it was not fair after that to be told that he ought not to sit in the Council because he lived in London. They would have candidates from all parts of the country and medical men would exercise their judgment and elect those they thought most capable. Certainly if he thought it would serve their cause better to take a house and reside part of the year in Manchester, in Durham, or in some other part of England he would be very happy to do it, but he did not think that it would make any difference in the manner in which he would represent them. He was happy to have been able to answer the charges that had been made against him.

Mr. VICTOR HORSLEY said he appeared there under rather extraordinary circumstances, because when he was elected at a by-election he intended to present himself at the next general election (with the hope of re-election) for the

purpose of saving the profession the expense of another by-election; he was unable to do so since about a fortnight ago he discovered that it was legally impossible for him to resign and stand again. Therefore he was unable to resign his seat and he was unable to appear before them as he had hoped in the guise of a candidate. But for all that he trusted they would allow him to regard himself as though he were a candidate and to give them an account of his stewardship for the four years during which he had sat at the Council at their pleasure. He did not second Mr. Brown's motion for the reason that as regarded the General Medical Council it was *ultra vires*. The Council had no statutory power to do what Mr. Brown asked it to do, and therefore he secured no seconder. As regarded the principle of Mr. Brown's motion he would like to say that he was absolutely at one with Mr. Brown. He thought it was right that if the General Medical Council was going to make anything like a new departure in penal legislation, in which they had absolute power, they should signify the same to the profession by a resolution. But the Act of Parliament conferred on the Council no power to pass such motions; if passed they would be illegal, and he was not going to second any motion of which he was not quite satisfied in regard to its competency. During the last five years a change had occurred in the attitude of the Council towards their profession, and he saw that now in 1901 things were extremely different to what they were four years ago. The members of the General Medical Council had been chiefly reinforced, oddly enough, by young men and the ideas of the Council had become more progressive in consequence. At any rate, the general feeling of the Council was much more sympathetic towards the profession at large, and especially towards those in general practice, than it was when he first joined it. Mr. Horsley proceeded to sketch out the lines of improvement in the procedure and act of the Council. During the last four years they had completely reformed the legal work of the Council. The late solicitor had resigned after that very critical case known as the Hunter case. The solicitor having resigned they had fortunately obtained the services of the solicitor to the Royal Courts of Justice, Mr. Winterbotham, a gentleman who had shown already how deeply interested he was in their work and how anxious he was to follow out every point, so that they should never come near a recurrence of such an awful scandal as that of the Hunter case. For some years the finances of the Council had been in a hopelessly rotten state and for three years he had tried to obtain at least an inquiry into their financial condition and into the measures that were necessary to put them into a stable state. At last they had arrived at that point, but not without the most extraordinary misunderstandings on the part of Mr. Bryant the treasurer, and worse misstatements on behalf of the officials by their regular spokesman, Dr. MacAlister of Cambridge. All he (Mr. Horsley), could say was that in spite of every effort to hush up the truth concerning the financial position of the Council, efforts in which even the device of moving the Council into secrecy had been resorted to, a device which to his mind was absolutely incomprehensible on the part of a body of English gentlemen who had to deal with public money. It seemed to be rarely remembered that the only money the Council worked with was public money—that is to say, the money which practitioners paid on registration, from which moment such money became the property of the nation, and all accounts connected with it had to be laid on the table of the House of Commons and were not legal until they had laid there for the statutory period. He showed in 1898 that those account sheets which were laid before the House of Commons were false, but, as usual, the officials of the Council endeavoured to suppress him. Now, however, he had been fortified in his action by the report of the financial expert, Mr. Frere, whose advice had been sought. Now, at least, he hoped they would have another argument for altering the Medical Acts, because such alteration was absolutely essential if they were to reorganise the finances of the Council. The point was illustrative of the way in which the work of the Council had been done in the past and it was also illustrative of the fact that they could always hope to get reform in the future. Reference had been made by Dr. Woodcock to the most important question that had really affected the profession during the last 10 years, because for all that period the General Medical Council had been living in a fool's paradise as regarded its real position towards the Government of the country. The Council was an intermediate body; it could not, of course, have any power over individuals of the kingdom, the members of the nation, it could not have any power over them of a kind which the central Government alone possessed. Therefore by the Medical Act the General Medical Council was placed under the Privy Council. As far as professional matters went the decisions of the General Medical Council were absolute, but when they came to matters of State policy the Privy Council intervened. For the last two years those of them who had followed the acts of the Privy Council in regard to the profession had seen with dismay that something was going on in the office of the Privy Council which was absolutely hostile to the general medical profession. Some influence was at work. Sir William Turner, the President of the Council, had repeatedly asked them to allow him to manage this or that piece of business by his personal intervention, and the Council had constantly placed such business in his hands for transaction by his personal action at the Privy Council. He had done his best, but what were the results? And they could only judge by results. He would take the midwives question as an example. The General Medical Council had laid down 10 points as absolutely essential in any Midwifery Bill. These were constructed during his services and those of Mr. Brown on the committee concerned, and he thought those 10 points were satisfactory, and that if they studied them they would see they absolutely safeguarded the interests of the public and the medical profession. Those 10 points were taken to the Privy Council Office. What was the result? The Duke of Devonshire, the President of the Privy Council, had on the most serious of those points gone back upon the Council, and that in spite of the fact that he had told a deputation of those who supported Lord Balfour's Bill that that deputation was to settle matters with the medical profession, and intimated that the General Medical Council was the mouthpiece of the profession. The system of negotiation thus only ended with the betrayal of the General Medical Council. Next, he would take the case of practice in Italy. Practice in Italy had been difficult in recent years, so their fellow-countrymen found out there, because the Italian Government wished to impose restrictions on them. They applied to the Government here to apply reciprocity. By the Act of 1886 the Privy Council could issue an order which became the law of the land that there shall be reciprocity between this country and a colony or a foreign country in regard to medical practice. The Privy Council, however referred all the documents to the General Medical Council. On this the General Medical Council nearly had all its freedom and liberty of speech taken away from it by its Executive Committee who without the slightest authority wrote to the Foreign Office in favour of the proposal. That however, they rectified at a subsequent session. First came the question whether it was in any way possible to institute reciprocity between England and Italy, and many of them showed in the Council that it was impossible. Some of them carried a motion which was to be embodied in the form of a letter to the Lord President of the Privy Council indicating the impossibility of this proposed reciprocity. This letter was actually before the Duke of Devonshire when suddenly an order in Council was issued that this reciprocity was to be established. So that the General Medical Council was wholly ignored, snubbed, and despised through this system of government by the Privy Council. Sir John Gorst, the Vice-President of the Privy Council, in referring to the case of Dr. Irvine before the General Medical Council, used these words in the House of Commons. He said concerning the appointment of Dr. Irvine as an inspector of schools that "at the time the appointment was made my noble friend the Lord President of the Council and myself had not heard of this charge against Dr. Irvine. (Opposition cries of 'Oh!') How could they have heard of it." Sir Walter Foster rose in his place, and he must have been surprised at the remark because he had been a member of the General Medical Council, and said, "You receive the minutes of the General Medical Council at the Privy Council." Sir John Gorst replied: "Neither my noble friend the Lord President of the Council nor myself have sufficient leisure to acquaint ourselves with the proceedings of the General Medical Council." He (Mr. Horsley) thought it was the most disgraceful transaction that ever occurred. He had said so at Birmingham, and it was duly reported in the *Times*. It was the most disgraceful

transaction that they could conceive of. Here was this Privy Council that had been communicating with them for so many years, and yet both the President and Vice-President of the Privy Council denied that they knew anything at all of the matter on which they had issued orders, &c. What, then, became of the letters sent to the Privy Council? what was the meaning of the letters received from the Privy Council signed by "Devonshire"? To his mind it was one vast farce from beginning to end. They were all agreed that there must be a new Medical Act. In the last four years they had driven home to the members of the General Medical Council the fact that there must be a new Act, but, as Dr. Woodcock had said, and he was glad to hear Mr. Jackson repeating that view, the only way was by remodelling the British Medical Association, by making that a truly representative body and having a representative meeting. So long as they brought together men from all parts of the country representing local practice and secured the support of that meeting in procuring a Medical Act Amendment Bill he knew that they would carry it in the House of Commons, provided they showed first the necessity for the reform of the General Medical Council and, secondly, that they had given a *quid pro quo* for the protection of their practice in the shape of enforcing the curriculum. Lastly, he wished to take the opportunity of repeating what had been said constantly elsewhere, that all these reforms that they wished to see carried out were presented to the judgment of the public as though they were designed solely for the benefit of the medical profession. That was a stupendous mistake. He would first get rid of the mistake that Mr. Chamberlain made in that same debate which he had referred to in the House of Commons where he alleged, quite under a misapprehension, that Dr. Irvine had infringed what he called a trade-union rule of the medical profession. Mr. Chamberlain asked, "Does the honourable gentleman say that to take lower fees than are usual is infamous conduct?" There was not a word in the debate from the beginning to the end of the true gist of the charge against Dr. Irvine—namely, the advertising and the touting which the General Medical Council held was infamous conduct in a professional respect. The public regarded the monetary relation of the medical profession purely in a commercial manner. They thought medical men wanted to sell in the dearest market and naturally they tried to buy in the cheapest and hence had arisen much misunderstanding. If they could only get the public to understand that the profession considered it a disgraceful thing for a professional man to undertake to attend an impossible number of patients—i.e., to undertake to treat these people honourably—then he thought the public would come into line with the medical profession. That was the way in which they ought to convince the public and the friendly societies that their motives were quite disinterested in that respect. In regard to the commercial side of the matter he thought they had a perfect position towards the public simply from this point of view, speaking now not of medical aid work but of ordinary contract practice, and that was that if the circumstances of the social life became more expensive of course it was reasonable that everything should rise in the same ratio. Next, in regard to the question of midwifery registration and legislation. The interest of the public demanded that the Sarah Gamp should be got rid of. The public had no intention, so far as he could see, to get rid of midwives nor did he think it was possible to do such a thing as had been suggested. The true facts about the midwives had never been explained to the public. The public laboured under the impression that a midwife could practise *midwifery*, and that impression had been distinctly fostered by the action of the Obstetrical Society and some leading gynæcologists. He thought that such persons merited being struck off the Register for misleading the public and distinctly suggesting infringement of the Act of 1896. They had to tell the public that a midwife was not a fit person to practise midwifery and that if she did attempt to do such a thing she ought to be punished. It was for the protection of the public that the midwives should not be allowed to practise midwifery and that these women should be punished for doing anything in the way of an operation, and it was in the interests of the public that they should be when in work under the control of a medical man. Those points seemed to be steadily concealed from the Members of the House by those who advocated Lord Balfour's Bill. Unless the medical profession watched that matter very closely when that Bill was re-introduced the penalising clauses would be dropped out. He happened to know as a matter of fact, curiously enough, that those same penalising clauses were probably the chief means of the Bill being withdrawn. Another important question, that of death certification, was so wrapped up with quackery and unqualified practice that it was a point upon which the public could not think that they were solely actuated by selfish motives. Even as regards quackery the action of the medical profession was in the interests of the public, for the loss to the profession was as nothing compared to the loss which the public suffered from the robbery of quacks. Death certification again was another instance of the General Medical Council attempting to manage public affairs simply by the intervention of the President. The President of the General Medical Council had had that matter in his hands on behalf of the Council the whole time he (Mr. Horsley) had sat on the Council, and they were not one whit nearer to reform in the matter. If they could bring about reform through the British Medical Association then they would have a ground-work for a real campaign against quackery. He looked upon that as a sort of side wind which would ultimately develop into a powerful gale. He could only conclude as he had begun by thanking them for electing him to the Council.

Dr. E. JEPSON proposed a hearty vote of thanks to the gentlemen who had taken the trouble to come so far and speak to them on medico-political matters. He would like to include Dr. A. Cox also in the vote of thanks because he had worked very hard in arranging all the details. For the success of that meeting they were indebted to each one of those gentlemen, especially to those who had come so far—Mr. Jackson from Plymouth, Mr. Brown from London, Dr. Woodcock from Manchester, and Mr. Horsley from London. He wished on behalf of the medical men of the North of England to express gratitude to those who had come and spoken to them.

The vote of thanks was duly seconded and passed with acclamation.

Dr. JEPSON having received permission from the meeting to bring forward a motion said that he thought it would be a good way of winding up the proceedings. The motion coincided in a great measure with what had fallen from Dr. Woodcock. The motion was to the effect that the time had arrived when steps should be taken to provide a new Medical Act, to make the General Medical Council more representative of the medical profession, to give greater powers to the Council, to enforce penalties against irregular and unqualified practitioners, and to institute a proper registration of this. He thought it was hardly necessary to point out that greater interest in medical matters had been aroused in the country and it behoved them to stir themselves up as regards reform. In England there were 20,000 medical men directly represented by three members on the Council; in Scotland there were 3000 medical men represented by one; and in Ireland there were 2000 medical men represented by one. If England were represented in proportion they ought to have six. With regard to the universities and corporations the representation for the universities was not in any sort of sense direct—in fact, it was very indirect; and when it was analysed it was found that perhaps half a dozen medical men only had anything to do with the election of a representative for a university on the General Medical Council. They had an instance of that in their own University of Durham. With reference to increasing the powers of the General Medical Council to deal especially with irregular and unqualified practice he pointed out that the properly registered practitioner was now in a more terrible position than a quack because he was well watched and looked after with jealous care, from all of which the quack was free. They should insist upon the proper registration of deaths because it was an important matter and there was greater laxity of the law in regard to it, and inquiry into the death registration would reveal circumstances which would astonish even the most unlearned in the land. He moved that the resolution should be forwarded to the Duke of Devonshire, to the General Medical Council, and to the local Members of Parliament.

Mr. MORISON suggested that the motion should read that the time had arrived when steps should be taken to provide a new Medical Act.

Dr. COX said that if that was the motion he would have much pleasure in seconding it.

Dr. J. F. ARMSTRONG asked what form the Act was going to take. They had had an interesting discussion and many valuable suggestions. But to his mind the motion as just read by Mr. Morison was a crude way of expressing their

wishes. He thought that the motion ought to include the further clauses which Dr. Jepson had suggested. He went into the subject of the registration of deaths in some detail and showed how it was impossible to avoid giving registration certificates without being paid for them and clearly showed that medical men should be paid a fee for certificates of death.

A speaker from the body of the hall moved that the subject should be adjourned. The words "a new Medical Act" were very vague and required considerable discussion. He therefore moved that the subject should be adjourned.

Dr. COX said he thought they were all unanimous that a new Medical Act was necessary and there would be time enough to go into all the details when the subject came before them. He thought that Dr. Jepson's motion as read out by Mr. Morison was quite in harmony with the views of the meeting.

Mr. MORISON pointed out that the meeting was more representative of the medical profession in that neigbhourhood than they would be likely to have for some time. He thought they were all agreed to the motion in the form that he had read it.

Dr. HILL said that if they wanted a new Medical Act they should state what they wanted in it. He would vote against any abstract motion of the kind suggested.

The motion was then put to the meeting by Mr. MORISON and passed with two dissentients.

The proceedings then terminated.

PLAGUE IN LIVERPOOL.

FIVE or six cases of illness occurred in Liverpool at the end of September and the beginning of October which, while they were set down as influenza, were suspected of being plague. The patients were placed in strict isolation and two of them, two little boys, died. Dr. Bulstrode, medical inspector of the Local Government Board, went down to Liverpool to confer with Dr. E. W. Hope, the medical officer of health upon the situation, and official information has since been received from the Board that the deaths were due to bubonic plague. Dr. Hope submitted on Wednesday afternoon to a joint meeting of representatives of the Health Committee and the Port Sanitary and Hospitals Committee a report containing full information of the circumstances. From the report it would appear that on Oct. 23rd two children named Edward W., aged 12 years, and David W., aged seven years, living at Radcliffe-street, were admitted to hospital as suffering from typhus fever. The ambulance inspectors found on arriving at the house to remove the patients to hospital that one of them, David, was dying, but that another one, James W., was ill. Edward and James were removed to hospital. On Friday evening, Oct. 25th, doubt was raised as to the real nature of the illness of the two children in the hospital, and the medical officer examined the children with Dr. Balfour Stewart. The suspicious character of the illness led to further investigation in the locality whence the patient came, when it was ascertained that a young woman named Margaret K., aged 29 years, residing in Exmouth-street, the house which is in the immediate rear of the W.'s house, was ill. In the meantime reference to the mortality returns had shown that Mrs. K., the mother of this young woman, had died at the same address on Sept. 28th, and that Rosie K., sister of Margaret, had died at the same address on Oct. 3rd, each after a brief illness, one at least of them having, it is alleged, complained of tenderness under the armpits. The deaths in each of these cases were certified to have been due to influenza and disease of the chest. Margaret K. was at once removed to the hospital, the nature of her illness being indicative of plague. On Oct. 18th the death of Mrs. L., in Radcliffe-street, had occurred and had been certified to be due to cerebral apoplexy. This woman was associated with the K.'s and had assisted in the washing and laying out of the body of Mrs. K. Into each of these fatal cases no further investigation was, of course, possible. The illness of both boys, Edward W. and James W., unfortunately had a fatal termination on Oct. 26th and 27th respectively.

These are the two cases in which a bacteriological examination has been made and has served to confirm the diagnosis. On Oct. 26th two children, Rubina J. and James J., also resident in Exmouth-street, and playmates of the K. family, were found also to be suffering from the plague and were removed to the city hospital, where they are at present, with Margaret K.

Dr. Hope in his report pointed to the fact that the patients were well-to-do people living in a respectable environment, and although one or two cases may still be found it is clear that all possible precautions have been, and are being, taken. From time to time during the past two years cases of plague have arrived in the port of Liverpool—a circumstance which Dr. Hope points out is inevitable in view of the fact that Liverpool trades with every port in the world, whether plague-infected or not. But the country may rest assured that although the door for the possible inlet of plague must always be open at Liverpool the doorkeepers scrutinise the entries so rigorously that anything like widespread infection would be immediately detected and stopped.

THE FIFTH INTERNATIONAL CONGRESS OF PHYSIOLOGISTS.

HELD AT TURIN, SEPT. 17TH-21ST, 1901.

THE following are some further abstracts of communications made to the above Congress:—

The Vagus Nerve Considered as a Motor Nerve of the Heart.

Professor OXIMUS (Monaco) brought forward considerations to show that the vagus nerve was like ordinary nerves, one which determined the activity of the organs with which it was in communication. He had found that when excited by a faradaic current interrupted with a frequency approximating the rate of the heart (instead of the usual rapidity of interruption) the nerve did not bring on inhibition of the heart, but, on the contrary, contractions which in the end synchronised with the rate of excitation. In all cases, and in every animal, the frequency of stimulation had much greater influence than the strength of the current, and he believed that it was only because a rapid interruption had ordinarily been employed that the nerve came to be looked upon as inhibitory. For example, to produce arrest it required from 15 to 20 shocks per second in the dog, from 20 to 25 in the rabbit, from eight to 10 in the frog, and from five to six in the tortoise. During the hibernation of cold-blooded animals and in debilitated conditions of the warm-blooded the requisite number was considerably less. Thus after a severe loss of blood in the dog from 14 to eight interruptions per second were sufficient to arrest the heart. It was therefore only under certain conditions that excitation of the vagus brought on inhibition and to understand the why and the wherefore of this it was necessary to regard the nerve as the motive agency of a rhythmic mechanism. A simple illustration would make his meaning clear. Suppose a machine were required to elevate a load one metre high, but that the weight were always caused to drop before reaching that height the machine never accomplished its function, however often and however forcibly the weight might be raised, even to a height of 99 centimetres. In the same way if the duty of a nerve-cell were periodically to call into play the activity of an organ, and if a certain period of rest were necessary after each performance, it could never succeed in fulfilling its function if discharged before the time necessary for the accumulation of the requisite energy. A period of rest, long or short, was essential to all organs, and if too short the machine became exhausted in direct proportion to the using up of the sources of energy accumulated by its nutrition. In voluntary organs such matters were regulated by the will, but in those of involuntary activity, when the period of repose brought the necessary accumulation of energy, function set in spontaneously and rhythmic activity was thus established. But if in these latter activity were provoked before the necessary repair had taken place function could not occur, not because they were paralysed, but because an active status was induced too often. Admitting, for example, that the ganglionic cells of the heart required one second of rest to accumulate the energy for producing a contraction, this latter could never occur if they were discharged every half second or even every three-quarters of a second. The heart would remain in diastole apparently paralysed. The greater ease with which the arrest of the heart (abnormal vagus activity)

could be called into play in debilitated conditions also pointed to the same conclusion—viz., that the nerve, like ordinary nerves, was one which called into play the activity of the heart and not its inhibition.

The Action of Ringer's Fluid and of Dextrose on the Isolated Heart of the Rabbit.

A very admirable demonstration of the above was given by Dr. F. S. LOCKE (London). An excised rabbit's heart fed solely with Ringer's fluid (through which oxygen under atmospheric pressure had been passed prior to entering the coronary vessels) was kept alive and strongly active for several hours. Ordinarily, weakening set in at the end of two hours, but it was very quickly brought on if the supply of oxygen were cut off. Renewal of the oxygen restored the activity almost as before. When gradual weakening set in under the influence of Ringer's fluid and oxygen the activity could be restored by adding 0·1 per cent. of dextrose to the nutrient fluid. The heart then remained strongly active for at least seven hours as a rule. Removal of the dextrose brought on the weak action at any period, while its renewal restored activity and this could be repeated many times in succession.

The Influence of Diet on the Restoration of the Asphyxiated Heart.

Professor PREVOST (Geneva) said that in previous experiments he had found that in attempts to restore the heart of an asphyxiated animal direct massage (with artificial respiration) was insufficient. Fibrillary contractions appeared notwithstanding the massage, and were only obviated by an electric discharge of suitable strength or by sending an alternating current of 240 volts through the organ. Recently Prus had succeeded in the majority of cases in preventing the onset of the fibrillary tremors simply by direct massage with artificial respiration. New experiments were therefore undertaken by Professor Prevost in conjunction with Dr. Batelli. In these it appeared that if the animals had been asphyxiated during digestion, massage without the electric current was often sufficient to restore the heart, but never when the animals were fasting. The effect was most constant after a meal of mixed foodstuffs, and of the individual constituents carbohydrates were the most effective, then proteids, and least of all fats.

A New Method for Investigating the Effects of Drugs or other Reagents upon the Mammalian Heart.

Dr. T. G. BRODIE (London) demonstrated an apparatus, devised by him, by which the total work performed by the heart of an animal could be determined before and after the administration of a drug. This was ascertained by recording the total output of the heart made to discharge under a constant pressure into a "stromuhr" which worked automatically. The total work was the product of the output multiplied by the mean pressure. Up till then the influence of anæsthetics had chiefly been studied, from which it appeared that chloroform markedly depressed the working capacity of the organ; ether, on the other hand, had but little effect unless given in very large doses, and ethylene chloride likewise had only a slight influence. Suprarenal extract increased the rate of the beat and largely augmented the work performed. It had, in fact, an antidotal effect to chloroform. If administered before the latter the heart withstood much larger doses of the anæsthetic, while a heart greatly depressed by chloroform recovered completely when suprarenal extract was introduced.

Demonstration of a Recording Stromuhr.

Professor HÜRTHLE (Breslau) gave a demonstration of a recording stromuhr. The working of the stromuhr was shown on a dog. The volume of the blood passing through it was recorded on a smoked cylinder. Lantern slides illustrating the chief results obtained by it were also exhibited. Amongst others these showed (1) the increased volume of blood flowing through the thyroid arteries after clamping the carotid, distal to their origin; (2) quickening of the blood-stream in one carotid in consequence of compression of the opposite, and also as a result of division of the vago-sympathetic nerve; (3) the blood-stream in the crural artery before and after division of the limb nerves and during tetanic contraction of the limb muscles (the latter caused slowing); and (4) normal blood-stream in the gracilis muscle and also during tetanisation of the muscle. The stromuhr also recorded the pulsatile undulations of the blood-stream, and could thus be used to study the relations between velocity and pressure at different phases of the same pulse curve. On a rapidly revolving cylinder observations could accurately be made at intervals as short even as one-fifth of a second. These showed that the velocity increased much more rapidly, in proportion, than the blood-pressure, as shown in the following example:—Blood-pressure in millimetres of Hg: 87, 93, 101, 110, 120, 131, 145, 161. Volume of stream in cubic millimetres: 400, 500, 600, 700, 850, 1000, 1200, 1500.

The Origin of the Lymph in the Peripheral Lymphatic Vessels.

A contribution to this much debated question was given by Professor G. MOUSSU (Alfort). He had made observations on the peripheral lymphatic circulation of large animals under such varying conditions as muscular rest and activity, physiological activity of all the tissues, during secretion, under variations of blood-pressure both local and general, under the effects of toxins both hypertensive and hypotensive, and under those of ergotin. The following were the chief conclusions at which he had arrived: (1) that the lymph in peripheral districts was not a product of simple transudation from the blood-plasma under the influence of blood-pressure; (2) that this transudation was at all times feeble; (3) that the lymph was above all a product elaborated by the tissues and represented blood-plasma largely deprived of its nutritive constituents; (4) that its formation was in direct correspondence with the vital activity of the tissues; and (5) that the peripheral lymphatic apparatus was in a certain sense an excretory apparatus.

The Relation of Blood Platelets and Leucocytes to Blood Coagulation.

Professor G. T. KEMP and Miss H. CALHOUN (Illinois) treated this subject. These workers said that they agreed with those who condemned methods of enumerating the platelets which necessitated the drawing of blood into a melangeur before mixing it with a fixing fluid. Van Emden's recommendation to cool the pipette with ice before using, was less objectionable, but meant considerable trouble. The best method was recommended by Laker in 1886, and independently by Professor Kemp in the same year. This consisted in an enumeration of the red corpuscles by one of the standard methods. They themselves had used the hæmatocrit. The skin of the finger was then pricked through a drop of fluid which fixed the blood platelets immediately. Their number and also that of the red corpuscles were determined in the mixture. The absolute number of the platelets could now be calculated from the ratio they bore to the red corpuscles. The most satisfactory fixative was found to be 2½ per cent. "formol" dissolved in 1 per cent. sodium chloride tinged either with methyl violet or methyl green. The number of leucocytes was determined by the Thoma-Zeiss hæmocytometer, using 1 per cent. acetic acid coloured with methyl violet as the diluent. In normal blood the number of platelets per cubic millimetre taken from a mean of 75 observations on 19 different individuals was found to be 778,000. The maximum was 961,500, the minimum 730,000. In the dog, from 15 observations on 10 different animals, the mean was 381,000, the maximum 461,000, and the minimum 349,000 per cubic millimetre. The ratio to the number of red corpuscles was fairly constant but bore no definite correspondence to that of the leucocytes. The connexion between blood platelets and leucocytes and blood coagulation was investigated by a method which they termed "fractional defibrination." A certain proportion of the estimated blood-content of an animal was drawn, defibrinated, filtered, and returned to the circulation. This process was repeated till fibrin was no longer formed. At each interval the red corpuscles, leucocytes, and blood platelets were counted. A similar method had been used by Bizzozero and Bizzozero with Sanquirico when studying the regeneration of blood and the effects of its transfusion. The platelets disappeared progressively with each defibrination, and after the blood had lost its coagulability (from the sixth to the tenth defibrination) they were no longer present. The leucocytes disappeared to some extent, but never completely. Large numbers of them were, however, filtered out, as shown by examining the same specimen before and after filtration. Mononuclear and polynuclear leucocytes were present at all stages and also after complete defibrination. The red corpuscles suffered some diminution but much less than the leucocytes. In leukæmic blood these changes could be studied very readily. During regeneration the leucocytes returned to their normal numbers first, then the red

corpuscles, and last of all the platelets. Professor Kemp and Miss Calhoun, therefore, disagreed with Lilienfeld that progressive disintegrative changes in the leucocytes accompanied the coagulation of normal blood. Lacerated and broken leucocytes were often to be seen in defibrinated specimens and in films preserved by drying. Any diminution in their number was, therefore, probably due to physical laceration or other such effect rather than to chemical disintegration. A true chemical disintegration was suggested by the fusion and breaking up of the spindle corpuscles of frog's blood, but no similar changes were ever observed by them in mammalian leucocytes. Further, it was the exception for leucocytes to form nodes in the fibrin network of coagulation, while it was the rule for masses of platelets to do so. In diluted blood, however, and in thin films, the fibrin was often deposited as needle-shaped crystalloids totally apart from any of the corpuscular elements. The platelets were biconcave, as Hayem had stated, at least when fixed with osmic acid or examined in Hayem's fluid, but they were never found to contain any traces of hæmoglobin and therefore could not be regarded as hæmatoblasts as Hayem meant. Their micro-chemical reactions resembled those of red corpuscles and also those of the nuclei of leucocytes, but were not identical with either. The platelets resisted the digestive action of dilute HCl and pepsin, as Lilienfeld had shown, and this fact indicated a rich content of nucleoproteid, but Macallum's reaction for phosphorus in organic combination gave discordant results. A definite opinion as to their composition was therefore reserved. Professor Kemp and Miss Calhoun agreed with Bizzozero that the platelets were independent elements since it had not been satisfactorily shown that they were related to, or derived from, any of the better known corpuscular elements of blood. Finally, they were the only elements the disintegration of which was to be seen in the coagulation of normal blood.

Recent Researches on Blood.

Dr. A. PETRONE (Naples) related results which he had obtained in the study of blood corpuscles by using dilute sulphuric acid as a fixative. In aqueous solution it was of great value in examining the number of white corpuscles, enabling this to be done with ease, rapidity, and certainty. It also revealed the chief forms of their nuclei and allowed of the staining of their protoplasmic granules beautifully. Altogether it yielded him better results than any other fixative employed. When used in minimal quantities added to absolute alcohol it demonstrated a yellowish-brown iron-holding substance within the red globules which Dr. Petrone claimed to represent the primitive nucleus which had not wholly disappeared. Similar appearances were observed in the nuclei of oviparous and embryonic corpuscles. The alcoholic solution fixed ferruginous substances *in situ* and was thus of special value in studying morbid alterations of the corpuscles in chlorosis, &c. By its employment Dr. Petrone believed that he had contributed to the settlement of two very debated problems in hæmatology—viz., the independence of the blood platelets as claimed by Bizzozero and the persistence of the nuclei of the erythrocytes, which, as stated, were not lost but hidden by a great development of hæmoglobin and at the same time transformed chemically from having acid properties like all other nuclei to being basic in function and reaction. It was essential that the reagents should be pure, and it was hoped that the method, for its own sake, would receive wider recognition.

SANATORIUM FOR SOMERSET, DORSET, AND DEVON.—Great interest is being manifested in the proposal for the establishment of a sanatorium for consumptive patients in Somerset, Dorset, and Devon. The subject was recently prominently before the Dorset County Council and the West Hants branch of the British Medical Association.

READING PATHOLOGICAL SOCIETY.—The sixtieth annual meeting of the Reading Pathological Society was held at the Royal Berkshire Hospital on Oct. 24th, when Dr. Dawson Williams, the editor of the *British Medical Journal*, gave an oration on "Therapeutic Institutions." The orator reviewed the various institutions which are rapidly appearing in this and other countries for the treatment of special diseases and discussed their effect on medical practice. The members and visitors afterwards dined together.

Looking Back.

FROM

THE LANCET, *SUNDAY, NOV.* 2, 1823.

To the Editor of the Lancet.

SIR,—As the instrument you use is calculated to reduce those systems which are overloaded with what the old school would have considered vitiated fluids, I wish to call your attention to a morbid condition of that body to which the public applies the general term of THE FACULTY; in which sweeping appellation is included many beings who have nothing but self-appointed titles, by which they gull the community. We see over the shops, and at the private doors of self-taught druggists, in splendid letters, Surgeon, &c.—Surgeon and Accoucheur, &c. &c.—and, by the effrontery and speciousness of these displays, the multitude believe them worthy of every confidence; and the regular and respectable young practitioner is overlooked and daily insulted through these exhibitions. Now, as there is no redress to be had by an appeal to the legislature, I, as a young though regular surgical graduate and general practitioner, think it would be adviseable for those who are in like circumstances to assume some designation which would mark the authority with which we offer our services to the public, and which might be a means of salutary depletion. I would propose that instead of the term surgeon, every member of the college, who deems it right to express the nature of his profession on the front of his dwelling, should write up Collegiate Surgeon. If this suggestion be deemed worthy of consideration, you will oblige me by giving it a place in the Lancet.

I am, yours respectfully,

JUVENIS,

Collegiate Surgeon and Authorised Medical Practitioner.

London, Oct. 24, 1823.

NOTICE TO CORRESPONDENTS.

Mr. J. is sincerely thanked for the Copy of Guy's Will; we have not yet had leisure to examine it.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6767 births and 3663 deaths were registered during the week ending Oct. 26th. The annual rate of mortality in these towns, which had been 15·6, 15·9, and 16·8 per 1000 in the three preceding weeks, declined again last week to 16·7 per 1000. In London the death-rate was 16·1 per 1000, while it averaged 17·0 in the 32 large provincial towns. The lowest death-rates in these towns were 9·9 in Wolverhampton, 10·6 in Leicester, 10·8 in Croydon, and 11·4 in Brighton and in Halifax; the highest rates were 21·2 in Plymouth, 22·3 in Manchester, 22·5 in Blackburn, and 25·2 in Newcastle. The 3663 deaths in these towns last week included 398 which were referred to the principal zymotic diseases, against 525, 485, and 467 in the three preceding weeks; of these 398 deaths 114 resulted from diarrhœal diseases, 80 from measles, 64 from diphtheria, 56 from "fever" (principally enteric), 43 from whooping-cough, 34 from scarlet fever, and 7 from small-pox. The lowest death-rates from these diseases were recorded in Wolverhampton, Leicester, Birkenhead, Burnley, and Gateshead, and the highest rates in West Ham, Cardiff, Norwich, and Blackburn. The greatest mortality from measles occurred in Norwich, Manchester, Blackburn, and Sheffield; from scarlet fever in Blackburn; from whooping-cough in Newcastle; and from diarrhœal diseases in West Ham, Swansea, Liverpool, Blackburn, and Sunderland. The 64 deaths from diphtheria in the 33 towns included 26 in London, six in Cardiff, six in Leeds, five in West Ham, four in Portsmouth, three in Sheffield, and three in Hull. Six fatal cases of small-pox occurred in London and one in Liverpool, but not one in any other of the 33 towns. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 169, 175, and 172 at the end of the three preceding weeks, had increased again to 180 on Saturday, Oct. 26th; 57

new cases were admitted during the week, against 51, 37, and 47 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 3353, against numbers increasing from 2994 to 3344 on the seven preceding Saturdays; 400 new cases were admitted during the week, against 426, 422, and 407 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 132, 186, and 196 in the three preceding weeks, further rose last week to 242, but were 73 below the corrected average number. The causes of 33, or 0·9 per cent., of the deaths in the 33 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Leeds, Hull, and in 16 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Manchester, Sheffield, and Newcastle.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 14·5, 16·1, and 16·9 per 1000 in the three preceding weeks, further rose to 19·3 per 1000 during the week ending Oct. 26th, and was 2·6 per 1000 above the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 13·7 in Paisley and 14·7 in Leith to 23·6 in Aberdeen and 29·0 in Greenock. The 616 deaths in these towns included 27 which were referred to diarrhœa, 13 to "fever," 12 to measles, eight to whooping-cough, five to diphtheria, and four to scarlet fever. In all, 69 deaths resulted from these principal zymotic diseases last week, against 62 and 79 in the two preceding weeks. These 69 deaths were equal to an annual rate of 2·2 per 1000, which was 0·4 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of diarrhœa, which had declined from 53 to 30 in the five preceding weeks, further decreased last week to 27, of which 12 occurred in Glasgow, seven in Aberdeen, three in Edinburgh, two in Leith, and two in Greenock. The deaths referred to different forms of "fever," which had been six, six, and five in the three preceding weeks, rose again to 13 last week, and included 11 in Glasgow. The fatal cases of measles, which had been 14, six, and 15 in the three preceding weeks, declined again last week to 12, of which 10 were registered in Glasgow and two in Dundee. The deaths from whooping-cough, which had been five and 12 in the two preceding weeks, declined to eight last week, and included six in Glasgow and two in Edinburgh. The fatal cases of diphtheria, which had been six, six, and 12 in the three preceding weeks, declined again last week to five, of which three occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 75 and 97 in the two preceding weeks, further rose last week to 133, but were six below the number in the corresponding period of last year. The causes of 23, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·9, 19·7, and 19·9 per 1000 in the three preceding weeks, declined again to 19·3 per 1000 during the week ending Oct. 26th. During the past four weeks the death-rate has averaged 19·7 per 1000, the rates during the same period being 15·5 in London and 15·4 in Edinburgh. The 139 deaths of persons belonging to Dublin registered during the week under notice showed a decline of four from the number in the preceding week, and included nine which were referred to the principal zymotic diseases, against 20, 21, and 10 in the three preceding weeks; of these, five resulted from diarrhœal diseases, two from whooping-cough, one from scarlet fever, and one from diphtheria. These nine deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 1·4 in London and 1·5 in Edinburgh. The deaths from diarrhœal diseases, which had been nine, 14, and five in the three preceding weeks, were again five last week. The mortality from whooping-cough was slightly in excess of that recorded in each of the two preceding weeks. The 139 deaths in Dublin last week included 28 of children under one year of age and 33 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed a considerable diminution as compared with the numbers in the preceding week. Five inquest cases and three deaths from violence were registered; and 46, or about one-third, of the deaths occurred in public institutions. The causes of six, or more than 4 per cent., of the deaths in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon A. Patterson to the *President* for three months' hospital study. Surgeons: A. La T. Darley and E. S. Tuck to the *Duke of Wellington*; O. Rees to the Cape Hospital; W. J. Coddrington to the *Gibraltar*; and H. Spicer to the *St. George*.

ROYAL ARMY MEDICAL CORPS.

Captain John Thurlow Clapham is placed on temporary half-pay on account of ill-health. Dated Oct. 21st, 1901. Lieutenant-Colonel George Harrison Younge retires on retired pay on account of ill-health. Dated Oct. 30th, 1901. Captain F. J. W. Porter is seconded for service with the South African Constabulary. Dated July 1st, 1901.

It has been decided that civil surgeons who have been appointed to the Royal Army Medical Corps, may count their service in South Africa towards retirement, but not towards promotion.

Lieutenant-Colonel H. J. Barnes has arrived at Colchester for duty and has assumed medical charge of officers, women, and children.

Out of the probable prospective increase of 102 officers to the corps 40 will be added to the cadre in India.

INDIA AND THE INDIAN MEDICAL SERVICES.

The King has approved of the following promotions among the officers of the Indian Medical Service:—Lieutenants to be Captains (dated July 27th, 1901): Thomas Hunter, Walter Rothney Battye, Harold Budgett Meakin, George Hutcheson, William Glen Liston, Harold Boulton, Richard William Anthony, Ernest Frederick Gordon Tucker, George Edward Stewart, Frank Stuart Corbitt Thomson, Thomas Shepherd Novis, John William Watson, and Herbert Joseph Richard Twigg.

The King has also approved of the retirement from the service of Lieutenant-Colonel Sarkies Thaddeus Avetoom (Bombay Establishment). Dated Oct. 1st, 1901.

VOLUNTEER CORPS.

Rifle: 4th Volunteer Battalion the Queen's (Royal West Surrey Regiment): Surgeon-Lieutenant F. Norman to be Surgeon-Captain. 2nd Volunteer Battalion the King's (Liverpool Regiment): John Graham Martin to be Surgeon-Lieutenant.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant Albert Hilton, 3rd Volunteer Battalion the Manchester Regiment, to be Surgeon-Lieutenant.

SOUTH AFRICAN AFFAIRS.

There has been a good deal of fierce fighting on a relatively small scale near Zeerust, when the British were attacked by Delarey and Kemp's commandos; the casualties on both sides were severe. Several engagements have also taken place in various directions elsewhere, otherwise there is not much military news of any importance to be chronicled. What there is, if taken as a whole, is distinctly favourable, although it is not of a decisive character and does not point to any speedy end of the struggle in South Africa.

The system adopted by Lord Kitchener seems to be, practically speaking, the only available one under the circumstances. Under that system the detachments of troops scattered throughout the various districts and along the line of rail occupy blockhouses of corrugated iron surrounded by barbed wire. These form excellent defensive posts, while columns making concerted and converging movements are free to operate elsewhere and to sweep the country and make attacks from time to time on the Boer laagers. If the process is slow it is nevertheless sure, and from all we hear systematic progress is being made—the Boer raiders in the Cape Colony are being steadily driven back, laagers are from time to time surprised and Boers captured, together with the loss on their part of munitions of war, transports, cattle, and supplies. There have been rumours of the death of De Wet, but we shall probably find ere long that that redoubtable and

enterprising warrior is still very much alive and that he has simply been hibernating while hatching some new scheme during his retirement from active operations in the field. Previous experience has shown that irregular warfare of this kind is almost always protracted. It was so in Bosnia and in the Burmese war, and it is so, as the Americans find to their cost, in the Philippines, whither large reinforcements will have to be sent from the United States.

From all that we can learn—and some of our information is gathered from private letters received from those on the spot—there is a very large amount of exaggeration about the condition of the Boer women and children in the camps of concentration. They are well supplied and well cared for. What is wanted is sanitation and a change of site for these camps and the splitting of them up into smaller camps, but this entails great difficulties of administration and not least so in finding a sufficient number of medical officers for the purpose. It is the aggregation, however, of too many people on limited and fouled sites, offering such facilities for the breeding and spread of infection, and the want of proper care and personal cleanliness on the part of the Boers, that have been the main causes of the sickness and mortality among them.

The list of casualties has, of course, increased since we last wrote owing to recent fighting and there is still a very regrettable amount of sickness (mostly from enteric fever) present. We hope that all practicable precautions are being taken for the coming hot season in South Africa.

THE SOUTH AFRICAN CONSTABULARY.

Lady Baden-Powell has issued a circular letter to the press in which she expresses on behalf of herself and those associated with her grateful thanks to the many anonymous donors who are sending parcels and money to buy Christmas comforts for General Baden-Powell's South African Constabulary. She also wishes it to be known that the committee have received as many books and magazines as can be forwarded, and that it would greatly facilitate the work of distribution if those who prefer to send in their own parcels would put "S.A.C." and their names clearly on the outside of each parcel. At the same time contributions in money are preferable, affording a great economy in packing and transport. Tobacco can be sent out "in bond" and in special air-tight cases. Funds can be sent to any of the following ladies, and will be personally acknowledged by General Baden-Powell; Lady Baden-Powell, 114, Eaton-square, S.W.; Mrs. Nicholson (no parcels), Basing Park, Alton, Hants; Mrs. McLaren, Glengarry, Woking; and Miss Baden-Powell, 8, St. George's-place, Hyde-park-corner.

SYRACUSA CONVALESCENT HOME, TORQUAY.

The half-yearly meeting of the subscribers of this convalescent home for wounded soldiers from South Africa was held on Oct. 22nd. The report showed that during the 21 months the home had been opened 256 men had been admitted, the stay on an average being two months, and the cost for food about 8*s.* weekly. The subscriptions during the time had amounted to £3042 and there was a favourable balance of £794. The sub-committee have decided to close the home in December next, when it will have completed two years' useful work, and as the Government have now plenty of accommodation at their disposal for convalescent soldiers it is considered that there is no necessity for keeping the home open after the end of the year.

LEAN'S ROYAL NAVY LIST.

Few works of reference are so accurate in detail or are arranged in such an admirable manner for ready reference as Lean's Royal Navy List. The ninety-sixth issue of this quarterly publication is now before us and contains matter of interest to all whose business or calling brings them in contact with the King's Navy. Promotions, retirements, and appointments as recent as Nov. 1st are recorded. The publishers are Messrs. Witherby and Co., 326, High Holborn, and 4, Newman's Court, Cornhill. The price of a single volume is 7*s.* 6*d.*; the yearly subscription is £1 7*s.* 6*d.*

A CENTENARIAN.—It is stated that Signor Angelo Alviti, a lawyer at Alatri in Italy who is 101 years of age, has just married a woman of the age of 26 years. Signor Alviti's mother was said to have died at the age of 105 years. He has two daughters aged respectively 77 and 72 years.

Correspondence.

"Audi alteram partem."

THE REORGANISATION OF THE ARMY MEDICAL SERVICES.

To the Editors of THE LANCET.

SIRS,—The report of Mr. Brodrick's Committee on the Reorganisation of the Army Medical Services has called forth a great amount of criticism. Much of this criticism is appreciative and generous, and much of it that is hostile is full of valuable suggestions for amendment. Among those, however, who condemn the scheme with such a thoroughness as marked the cursing of the jackdaw of Rheims are some who have evidently imbibed the principle that the Army Medical Service can do nothing but evil all the days of its life, and must, even in its attempts at reform, be influenced by a kind of original sin. There are others who condemn the report *in toto* because they disapprove of certain matters of detail contained therein or base their condemnation upon the omission of details with which the committee could have in a general report no possible concern. There has, indeed, been a disposition in many quarters to appraise the scheme upon a consideration of isolated particulars which, although important in themselves, are insignificant when compared with the general principles upon which the plan suggested in the report is founded. These general principles have been by many critics totally disregarded and have been by others made subservient to matters of secondary import. I should be glad to be allowed to draw attention to the main bases upon which the scheme is founded, lest they be lost sight of in the numerous side issues which are being raised.

In the first place, it may be pointed out that the subject is a very vast one and that the report provides no more than a framework upon which it is hoped that a system of reconstruction may be based. It has no pretence to be a scheme complete in all details. I think that my civilian colleagues on the committee will agree with me that the attitude of the Secretary of State for War in presenting the scheme was not that of a Minister granting concessions under pressure, but that of a Minister who was earnestly desirous of establishing an Army Medical Service which should attract candidates of the best type, which should offer them every inducement to remain in the service, and at the same time to make advance in the work of their profession and fit themselves for the increasing responsibilities of their office. Above all was the desire that the medical department should be made absolutely efficient, should be made worthy of the great army with which it is associated, and should aim at becoming the best medical service of which any country could boast.

The principal features of the scheme are as follows:—

1. The Royal Army Medical Corps is to be under the supervision of an Advisory or Consulting Board, composed of six army officers and four civilians. The Director-General, however, remains "responsible for the administration of the army medical services" and is "responsible for the distribution, promotion, discipline, and general organisation of these services."

2. A very substantial increase in the *personnel* of the Royal Army Medical Corps is rendered necessary.

3. The pay is increased and is raised to a standard more in accord with the pecuniary prospects of a medical man in civil practice at the present time.

4. Liberal opportunities for study are given, while the increase in the corps will obviously give each officer a less share of foreign service.

5. Advancement in the service is by professional merit in distinction to the plan of advancement by seniority. The most speedy promotion falls to the best medical officer.

6. Charge pay is granted and an increased rate of pay is given to those officers who qualify and are employed in certain special branches of medicine and surgery.

7. The establishment of a military hospital and medical staff college for the training of officers of the Royal Army Medical Corps is strongly urged.

The most vigorous objections to the plan laid down in the report are directed to three matters: 1. The Advisory Board. 2. The system of examinations. 3. Certain questions of pay.

1. The utility of the Advisory Board has called forth great diversity of opinion. Those who think the institution of such a board most admirable are equal in numbers to those who condemn it absolutely. Considering the very wide range of subjects which must come within the purview of those who are responsible for the administration of the medical services of the army it would seem that an Advisory Board is almost a necessity. It is an Advisory Board and not an Executive Board. The executive rests with the Director-General. There is nothing in the report to justify the comment of one critic that under the new scheme "the Director-General as a personal factor in the R.A.M.C. practically disappears," nor is there any basis for the suggestion that the board is the outcome of a mistrust in the executive. It would not be difficult to show that an Advisory Board, such as is suggested, would greatly strengthen the hands of those who are charged with the varied responsibilities of administration. Those who condemn the board under the impression that promotions are made by it should read paragraphs 14, 18, and 19 of the report in which it is clearly laid down that the Director-General is "responsible for promotion."

2. The system of examinations has led to much adverse comment. It is the purpose of these examinations to make promotion in the service dependent upon professional ability and to grant the fullest advantages to the officer who does his best to keep his medical and surgical knowledge abreast of the times and who has taken the pains to master some speciality in practice. After receiving his commission an officer under the new scheme undergoes three examinations in the place of two which formerly existed, one of which has sunk into abeyance. So great an alteration has been made in the entrance examination that it has ceased to be the vexatious and irritating test that it was. All the examinations are intended to be practical and as far as possible by *viva voce*. The system of testing proficiency by examination is—and always has been—open to considerable question. This applies not only to these particular tests but to all medical examinations. The powers that be, however, have not yet devised any method other than that of examination whereby the entrance of a candidate into the profession can be determined or his fitness for the higher degrees decided. In many hospitals the selection even of house surgeons is by examination. Indeed, at present no other means presents itself which could be regarded as just and adequate except the testing by examination, and it is noteworthy that those who object to such testing in the case of the Army Medical Service have suggested no substitute measure. No one has recommended that promotion should depend upon "confidential reports," and I imagine that no one could be found who would defend that unjust and objectionable system. It must be remembered that while mere promotion is by an examination which tests the officer's capabilities as a professional man, the selection of officers for special appointments rests with the Director-General who will no doubt be influenced by evidence of special fitness in those eligible for such appointments. The examination which has excited most comment is that for promotion to the rank of lieutenant-colonel. This must be passed before the officer has completed 20 years' service and as a preparation for it a period of three months' study is granted. The examination does not deal with medicine or surgery or with any allied science. It is concerned solely with the very administrative work which the officer will—if promoted—be called upon to carry out. Among the subjects are the following: "Hospital organisation, administration, and equipment in peace and war," "The sanitation of towns, camps, troop transports, &c.," "Epidemiology and the management of epidemics," and "The duties of all ranks in the Royal Army Medical Corps." (It is probable that no great stress would be placed upon two of the subjects—viz.: "The medical history of important campaigns" and "The army medical services of other Powers.") The candidate is required to obtain 50 per cent. of the total number of marks. If he fails he is allowed to present himself for a second examination at the end of six months. If he again fails to obtain 50 per cent. of marks he is "compulsorily retired on a gratuity of £2500, or he may, by special permission of the Secretary of State, complete 20 years' service and then retire on a pension." While every possible consideration should be shown to any officer who has been in the service for nearly 20 years it can scarcely be considered a hardship if before he is raised to a position involving very responsible duties he should be asked to give evidence of a minimal knowledge of the matters appertaining to those duties. Moreover, should it become evident, after two trials, that he does *not* possess that knowledge it would hardly be right to promote him to a post in the qualifications for which he has shown himself hopelessly lacking. No man competent to undertake the duties of the higher rank could object to the examination. The incompetent man naturally would object to it.

3. On the subject of pay I am not competent to speak. I would only say that from a comparison of the proposed rate with that now in vogue it would appear that the increase is substantial and generous. It is possible that the scale will need amendment in certain directions, and it is possible also that the much-cherished "right" to retire after 20 years' service on £1 a day has not been so entirely overlooked as some who have written on this subject suppose.

I am, Sirs, yours faithfully,

Wimpole-street, London, W. FREDERICK TREVES.

To the Editors of THE LANCET.

SIRS,—"I am the commanding officer," was the reply of the chief medical man on board an American hospital ship, which with regard to equipment and management is described as "approaching perfection," when he was asked where the captain was. If our Army Medical Service is to approach perfection the chief surgeon with an army in the field must in like manner be his own commander, subject only to the general. At present the chief surgeon is expected to serve many masters, and the highest authority has pronounced that to be impossible. Until the chief surgeon is delivered from the power, amongst others, of the commissariat and ordnance departments he never will be able to do justice to the sick and wounded during a campaign. Transport and equipment should be under his control. This means money, and a great deal of it, and it is imperative that the people of England should know how the matter stands. If they choose to find the money well and good, but it is unfair to blame the surgeons for failing to do impossibilities.

I am, Sirs, yours faithfully,

Oct. 28th, 1901. PROPHYLAXIS.

ARSENIC IN BEER: THE EPIDEMIC OF PERIPHERAL NEURITIS.

To the Editors of THE LANCET.

SIRS,—In answer to your kind request that we should state the facts of our position with regard to the recent epidemic of peripheral neuritis we take pleasure in sending the following particulars:—

In September of last year we noticed the excessive incidence of peripheral neuritis in patients attended both in and from the Chester Infirmary, and quite independently concluded that many of the cases more closely resembled beri-beri than any other disease of which we were cognisant. Knowing of the recent epidemic at the Richmond Asylum, Dublin, we communicated with Mr. Conolly Norman, who very kindly, on Nov. 12th, sent us his notes on the subject. A perusal of these strengthened our opinions, and on Nov. 17th we completed a paper which appeared in the *British Medical Journal* of Dec. 1st. On Nov. 23rd we learnt with some surprise of a similar epidemic in Manchester, and on the evening of that day one of us (J. R. P.) went over, and, through the courtesy of Dr. Corsar Sturrock, was allowed to see several of the cases in the Manchester Royal Infirmary and was able to demonstrate the presence of a peculiar pre-tibial and pre-sternal œdema in each case, a point which had up to then escaped observation there. On the morning of Nov. 24th we called upon the medical officer of health of Chester, and with him saw the chairman of the Public Health Committee, and with a view to eliminating our theory of the disease we urged that an expert in tropical diseases should be asked to see the cases at once. Accordingly on the next day Major Ronald Ross came over, and by the kind permission of the medical staff saw 10 of the home and in-patients of the Chester Infirmary, and expressed his opinion that the disease resembled tropical beri-beri even to the minutest details. Major Ross forwarded a communication to that effect which appeared in THE LANCET of Dec. 8th, p. 1677. With regard to the etiology of the disease we cannot do better than refer you to our conclusions which appeared in the *British Medical Journal* of Dec. 8th. Our main contention was the extreme resemblance which the cases presented to beri-beri, and we expressed the opinion that they were either this disease or

that a condition indistinguishable from it could be produced by some other cause. These ideas were very adversely and, we think, unfairly criticised, and now, after the lapse of nearly a year, appear to be receiving considerable confirmation.—We are, Sirs, yours faithfully,

W. A. NEWALL, M.D., Ch.B. Vict.
J. R. PRYTHERCH, M.B., Ch.B. Edin., M.R.C.S. Eng.,
Oct. 28th, 1901. L.R.C.P. Lond.

THE NEEDS OF THE ROYAL LONDON OPHTHALMIC HOSPITAL (MOORFIELDS).

To the Editors of THE LANCET.

SIRS,—A year has now passed since the governors of the Royal London Ophthalmic Hospital were summoned for rates. At that time, thanks to the publicity given to the case, both by the London and by the provincial press, many friends sent prompt and generous help enabling the committee to meet this demand, and the rates were fully paid. The committee, have now, however, to face a similar demand, and this at a time when they are seriously hampered in their endeavours to meet the ordinary expenses of the hospital, by reason of the calls on the charitable public of other and more national demands. We, therefore, beg you to help them by making known to the public the very grave position of this great charity.

The committee had hoped that during the last session of Parliament an Act would have been passed to relieve hospitals, wholly or in part, from rates, but, although the Select Committee appointed by the House of Commons made their report as far back as July, 1900, there has been up to the present no legislation on the subject. The report called attention to the numerous anomalies existing in the rating of hospitals, some of which are exempted from rates by local statutes, while many have been treated with the greatest consideration by the rating authorities. On the other hand, the rates are a heavy burden to some hospitals, but few are so terribly crippled by them as the Royal London Ophthalmic Hospital, which is still compelled to keep half its beds closed, and although last year the annual subscriptions amounted to £1096, out of these rates and taxes to the extent of £896 had to be paid. This year the hospital has already paid £700 on this account, and now a further demand is made for £250. The local rating authorities say they cannot lower the assessment, and point out as one reason that this great hospital does not exist for the relief of the district or even of the City alone, but receives patients from every part of the kingdom. Therefore, the committee appeal to all for help to enable this national charity to tide over a pressing emergency.

Donations and annual subscriptions may be paid to Williams Deacon's Bank Limited, 20, Birchin-lane, E.C., or to the Secretary at the Hospital.

We are, Sirs, yours faithfully,

AVEBURY,
President.
H. P. STUMGIS,
Chairman of the Committee of Management.
HY. DAVISON,
Chairman of the Finance Committee.
Royal London Ophthalmic Hospital (Moorfields Eye Hospital), City-road, E.C., Oct. 29th, 1901.

"ACUTE DILATATION OF THE STOMACH

To the Editors of THE LANCET.

SIRS,—The following remarks may be of interest in connexion with the paper on Acute Dilatation of the Stomach, with Illustrative Cases, read before the Royal Medical and Chirurgical Society on Oct. 2nd by Dr. H. Campbell Thomson[1] and with the report of the discussion which appeared in THE LANCET.[2] Acute gaseous dilatation is of frequent occurrence, often associated with agonising pain and with a feeling of impending death, yet not fatal. In cases of this sort there is no permanent obstruction; usually unaccompanied by vomiting they tend to be relieved by it when it does occur. In them the pain is due to the excessive pressure of gastric inflation superadded to the normal or to an increased volume of intestinal gas, and the abdomen is enlarged, but to a great extent into the thorax. Fatal cases such as are brought forward by Dr. Thomson differ from them in all those particulars. The pain is not acute, vomiting does not relieve, the abdominal distension is not necessarily considerable or may be almost absent, the gastric distension makes for the abdomen rather than for the thorax, and the intestine is almost airless. Death occurs from the exhaustion of vomiting rather than from pressure. These are essentially cases of obstruction.

As noted by Dr. Thomson, the dilated stomach is bent at an angle, and, as I have repeatedly demonstrated in the post-mortem room, not only the pyloric portion, but the first part of the duodenum, is apt to take a sharply ascending direction, and the pancreas is also made to slope. The mechanism of the distension is obscure, and although in both groups we may admit a large element of disturbed innervation we are still unable to determine where the gas or the fluid may come from. But the mechanism of the fatal obstruction is capable of explanation and sometimes of relief, at least in a section of the cases. That in these the pylorus is not the seat of absolute obstruction is almost proved by the circumstance, urged by Dr. Voelcker in the discussion on the paper, that bile is vomited: it is entirely proved, as in Dr. Thomson's Case No. 2, by the fact that the first portion of the duodenum is distended as well as the stomach. As to Dr. Thomson's other cases, it may perhaps be allowable to suppose, in the absence of any statement to the contrary and on the strength of definite observations made in other instances, that in them the duodenum may have been in an analogous condition. Collateral evidence of the absence of pyloric stricture is afforded by the 10 cases which he tabulates,[3] only one of which presented pyloric disease (described as "narrowing the orifice"), whilst in the remainder no abdominal lesion was found except in two cases where the disease was in the vicinity of the duodenum. The combination of a collapsed intestine and of a distended first part of the duodenum, as in Dr. Thomson's Case No. 2, sufficiently localises the obstruction. The latter is found, as was shown by Rokitansky, and later by Glénard, Kundrat, Schnitzler, Albrecht, and others, at the junction of the jejunum with the transverse portion of the duodenum; this is strangled by the weight of the collapsed intestine which drags the mesentery, and particularly the superior mesenteric artery, as a cord over it. According to this view the collapse of the intestine, howsoever produced, whether from marasmus or more often from shock or exhaustion, is the primary event and not the result of compression by a dilated stomach, and obstructive gastric distension follows. As mentioned by P. A. Albrecht, whose exhaustive essay in Virchow's Archiv[4] was referred to in a joint communication made by Mr. F. Jaffrey and myself to the Harveian Society of London[5] "on a case of uncontrollable vomiting relieved by laparotomy and manipulation, and due to the pressure of an aneurysm," the individual length of the mesentery is one of the etiological factors. Intestinal collapse further elongates it so as to allow the intestine, particularly in women, to drop like a dead weight permanently into the pelvis. It is unnecessary that I should dwell upon the other factors and upon the various views which have been advanced, having given a brief account of them in the remarks appended to the paper just mentioned.

This anatomical explanation is probably applicable, with variations, to most cases, and in particular to those which occur after operations involving profound anæsthesia and shock, and to those which arise apparently spontaneously after relatively trivial complications, where the subjects are predisposed to enteroptosis by the original length of their mesentery and by previous malnutrition and exhaustion. I have suggested that in some of the mysterious cases of so-called "hysterical or neurotic" type, with advanced emaciation and prostration, the persistent vomiting may be kept up by analogous conditions independently of any major gastric dilatation.

The treatment of this form of obstruction is suggested by its cause. The stretched mesentery must be relieved by raising the intestine from the pelvic trough. The rational cure for the visceral malposition and the resulting gastric dilatation is posture. The knee and elbow position advocated by Albrecht may not often be available owing to

[1] THE LANCET, Oct. 26th, 1901, p. 1113.
[2] Loc. cit., p. 1122.
[3] Loc. cit., p. 1115.
[4] Ueber Arterio-Mesenterialen Darmverschluss an der Duodeno-Jejunalgrenze und seine ursächliche Beziehung zur Magenerweiterung (with bibliography). Virchow's Archiv, Band clvi., Heft 2, 1899.
[5] THE LANCET, Oct. 28th, 1899, p. 1155.

the patient's weakness, but it may be possible to incline the patient to the right, to elevate the pelvis on pillows, and to raise the foot of the bed, whilst skilled manipulation is applied to the abdomen by the medical attendant himself. These simple measures should be borne in mind in all cases of persistent vomiting supervening in emaciated and exhausted subjects. Lavage is an obvious indication; and if, as alleged by L. Meyer, a distended and depressed stomach is competent to obstruct the duodenum, it might sometimes prove an effectual remedy. If all this should fail laparotomy remains as the only resource, and it should be performed with an eye to the form of obstruction to which I call renewed attention, and which, to include all varieties, might be described as "duodenal pressure-obstruction."

I am, Sirs, yours faithfully,

WILLIAM EWART, M.D. Cantab., F.R.C.P. Lond.,
Senior Physician to St. George's Hospital and to the Belgrave Hospital for Children.

Curzon-street, W.

To the Editors of THE LANCET.

SIRS,—Curiously enough, before I had seen Dr. H. Campbell Thomson's paper upon Acute Dilatation of the Stomach in THE LANCET of Oct. 26th, p. 1113, a case met with in the post-mortem room this afternoon seemed to suggest that probably many of the cases of moderate dilatation of the stomach found after death are of acute nature. In a woman, aged 25 years, who had died from puerperal fever, the stomach extended below the umbilicus, and, although it contained only about eight ounces of fluid it was found to be capable of holding 150 ounces of water without further distension. The duodenum also was much distended and was fully double its normal size. The jejunum was unaffected. In the last number of the *Bristol Medico-Chirurgical Journal* is a reproduction of a rough sketch of mine of a dilated stomach, which must almost, if not quite, have equalled in size the stomach of which Dr. Thomson has given an illustration. No mechanical obstruction was present and the duodenum in this case also was much distended. The cause of death was septicæmia associated with a suppurating thrombus in the left cavernous sinus.

I am, Sirs, yours faithfully,

Clifton, Bristol, Oct. 26th, 1901. THEODORE FISHER.

To the Editors of THE LANCET.

SIRS,—I shall be much obliged if you will allow me to add a few additional references to my paper on the above subject which appeared in THE LANCET of Oct. 26th, p. 1113. Since my paper was written I have had an opportunity of seeing the recently published work on "Diseases of the Stomach and their Surgical Treatment" by Mr. Mayo Robson and Mr. Moynihan. In the chapter on Acute Dilatation four fatal cases are recorded as having occurred at the Leeds Infirmary and two others in which recovery took place after the onset of acute symptoms; other cases in English and foreign literature are also alluded to. Among other interesting communications on this subject are those of C. R. Box and Cuthbert Wallace,[1] Dyson,[2] Kelynack,[3] and Donald Hood.[4]

I am, Sirs, yours faithfully,

H. CAMPBELL THOMSON.

Queen Anne-street, W., Oct. 28th, 1901.

"THE AFTER-COMING HEAD; PREVENTION OF ASPHYXIA."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. Edwin Smith's letter in THE LANCET of Oct. 26th (p. 1155) in which he asks what are the objections to the introduction of a tube into the child's mouth in cases of delay of the birth of the after-coming head, does it sometimes fail, and, if so, why? I would give the following answer. 1. The difficulty of introducing such a tube and keeping it *in situ* may be considerable. 2. Even after its introduction it is often impossible to get the child to breathe with its head in the vagina. 3. In many of these cases, owing to premature efforts at respiration having been made, the child's mouth and pharynx contain foreign matters, such as liquor amnii and blood. 4. Under these conditions the introduction of a tube, especially if the child be further stimulated to breathe, is likely to favour the passage of such fluids into the larynx and so further to increase the risk to the child's life. 5. The time spent in introducing a tube would be better employed in applying forceps to the head since cases are very rarely met with in which the head cannot be at once delivered by the use of forceps. 6. If the child makes attempts at respiration with the head still in the vagina, the immediate delivery of the head and the performance, if necessary, of artificial respiration are likely in the majority of cases to give better results than the use of a tube. 7. If the use of the tube fails, as the recorded cases show it sometimes does, valuable time will have been lost. 8. As the child's life is in danger any risk to the perineum of the mother may be neglected. I am quite prepared to admit that a delay of a few minutes may make all the difference to the chances of a bad tear of the perineum, but, as I have already said, when the life of the child is at stake this risk should not be taken into consideration. It is probable that the best results will be obtained in these cases by having ready at hand all the appliances necessary to revive the child if it be born asphyxiated; by keeping up well-applied pressure on the fundus of the uterus during the delivery of the trunk, so as to avoid extension of the arms and head; and by delivering the head as rapidly as possible if the child's life is endangered by shoulder and jaw traction, or, better still, by the application of forceps.

I am, Sirs, yours faithfully,

Wimpole-street, W., Oct. 29th. GEORGE F. BLACKER.

"THE SANITARY STATE OF TORQUAY."

To the Editors of THE LANCET.

SIRS,—I was glad to see in THE LANCET of Oct. 19th, p. 1075, a letter requesting you to use influence with the town council of Torquay to remove the Destructor from its present position. The letter fully explained why the situation in which it is placed is incurably faulty. But it hardly mentioned that the Destructor Committee hardily deny that the fumes issuing from the chimney are injurious to health, and intend—let me quote from the local paper—"to engage an analytical chemist of the first rank to analyse the fumes as they emanate from the destructor furnace" in order that the said wise-heads may determine whether "the complaints are founded on fact or fancy" and whether "the fumes are or are not noxious." As if fumes could be anything but noxious. So much for the judgment of our sanitary authorities. *Quis custodiet*, &c. Of course there are mortals whose noses are only more or less ornamental appendages, but even they condemn the clouds of smoke which drift round and about.

Our *patres conscripti* are not satisfied with this outrage on the purity of our air. A charming valley that, if at Bournemouth, would have been lovingly planted with flowers, is being, "by authority," filled with the garbage of the town. From this baleful barbarism issue breezy odours hardly helpful to those with delicate lungs, or throat, or stomach. We Uptonians are poor and cannot afford to apply for a legal injunction, and therefore we appeal to an authority respected by the civilised world—to you, Sirs—to aid us in the abolition of these nuisances.

I am, Sirs, yours faithfully,

S. GROSE, M.D. St. And., F.R.C.S. Eng.

Torquay, Oct. 25th, 1901.

"THE TREATMENT OF TUBERCULOSIS."

To the Editors of THE LANCET.

SIRS,—You published a few years ago a case of mine, "A Child, Four Years Old, with Acute Phthisis, Cured."[1] I then detailed the treatment. In all the correspondence I have seen in THE LANCET on tuberculosis nowhere have I seen any medicinal treatment recommended as having proved successful where everything has been against the patient's recovery, but as hundreds of cases of phthisis occur in which the patients are pecuniarily unable to avail themselves of the open-air treatment, it remains that such patients must die unless by medicinal treatment something can be done to check the disease if not to destroy it.

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[1] Transactions of the Clinical Society of London, 1898.
[2] Medical Press and Circular, vol. i., 1887.
[3] Medical Chronicle, vol. xvi., 1892.
[4] THE LANCET, Dec. 19th, 1891, p. 1389.

[1] THE LANCET, June 4th, 1898, p. 1536.

For years I have tried the treatment which proved successful in the case published and now I have three cases which may be seen. One is the case of a very near relative, a young man, aged 21 years. His illness began with an attack of influenza. He was a clerk away from home a day's journey, persisted in going to his work, slept in a bed in which the late occupant (the landlady's husband) died from phthisis, and of which he was not even made aware till after pulmonary tuberculosis plainly manifested itself, when the landlady informed him that "he was just like her late dear husband who died on that very bed he had been sleeping on." Means were not available to send this young man away. He has been treated at home, yet in spite of a decided check caused by a chill caught through carelessness by lying on the grass, setting up pneumonia with pleurisy, he is gaining strength, sweating has ceased, and he is gaining weight rather than losing. I feel this case so far will be enough and I need not trespass on your space with others to show that medicinal treatment, apparently neglected, may do much to alleviate the distress and the loss sustained by this disease. I am, Sirs, yours faithfully,

G. P.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague Epidemics.—Collapse of the Outbreak of "Epidemic Dropsy."

ANOTHER slight receding wave is noticeable in the general movement of plague mortality in India. This week there have been 236 fewer deaths, the total being 7043 as against 7279 last week. The reduction has taken place in the Bombay Presidency. A slight increase has occurred in the Punjab and Mysore. Bombay City returns 182 deaths, the Punjab 164, and Mysore State 345. Plague has appeared suddenly in Benares, but only a few cases have occurred as yet. The usual experience seems to be that when the disease either first attacks a place or recurs in it cases keep cropping up in small, but perhaps gradually increasing, numbers for several weeks, and that it then seems to take on a sudden outburst and rapidly develops to its maximum. After the maintenance of a very high mortality for a short time it subsides as rapidly as it rose. There are at the present moment several places in India where the disease has commenced to develop or to recur during the past few weeks. There are others where the disease continues mildly but uninterruptedly. The latter may expect their outbreaks in due course—that is, when the usual intervals have elapsed. As plague outbreaks have occurred at all seasons of the year the determining cause would seem to be independent of heat, dryness, or altitude. For any given place the accident of introduction would seem to determine the time of the year when it should be subjected to the epidemic influence. No other explanation seems satisfactory.

The small outbreak of so-called "epidemic dropsy" in Calcutta has completely subsided. No other cases have been reported. Nothing decisive has been discovered by the bacteriological examination of the blood.

Oct. 12th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The New Sanatorium in connexion with the Liverpool Hospital for Consumption.

ON Oct. 18th, in the presence of a large and influential number of invited guests, the Countess of Derby formally opened the new sanatorium in Delamere Forest (provided by Lady Willox and Mr. William P. Hartley at a cost of £15,000) in connexion with the Liverpool Hospital for Consumption. The idea of a sanatorium first suggested itself to Mr. Hartley, to quote his own words, "by reading a leading article and also reports of the proceedings under the presidency of the King (then Prince of Wales) at Marlborough House, and the speeches of eminent physicians from all parts of the kingdom." He felt irresistibly drawn to do something towards bringing Liverpool into line with that great movement for the benefit of patients affected with tuberculosis. He found a willing helper in Lady Willox, the wife of Sir John Willox, M.P. Lady Willox was unfortunately unable to be present at the opening ceremony owing to illness. She had watched the inception and the progress and now the completion of the building with great interest, and it was therefore, I feel sure, a keen disappointment to her not to be able to witness the opening of an institution to which she had contributed so largely. Lady Derby, in declaring the sanatorium open, expressed a hope that it would always continue to prosper and to do good.

Liverpool Country Hospital for Chronic Diseases of Children.

Mr. T. Sutton Timmis has contributed £1000 to the fund now being raised for the erection of the Country Hospital for Chronic Diseases of Children.

Liverpool Guardians' Joint Hospital for Tuberculosis at Heswall.

On Oct. 25th Mr. Walter Long, the President of the Local Government Board, laid the foundation-stone of the new joint Poor-law hospital for tuberculosis at Heswall. The site for the hospital is very pleasantly situated on the hillside near Heswall, well sheltered from the east winds, and commanding extensive views of the estuary of the Dee and the Welsh coast. The total area of the land is about 15 acres. The buildings are being erected with the main front facing due south. The administrative block will be in the centre, and immediately in front on the first floor will be an open-air sun-bath, divided for the two sexes. On either side of the administrative block will be the two wings, two storeys high, containing dormitories for 24 patients—viz., 12 male and 12 female. To every patient will be allotted 1000 cubic feet of air-space. All the windows will be made to open as casements and all the rooms will be heated when necessary during inclement weather. In the rear of the main building will be the dining-hall, connected by corridors, with cross ventilation, and fitted complete with the usual kitchen and other offices. The water-supply will be from the West Cheshire Waterworks and the drainage will be dealt with on the usual improved lines. The total cost of the land and buildings will be about £12,000. Mr. Long said that none of the duties which had fallen to his lot—and many of them were agreeable—had given him so much and such permanent pleasure as the one which he had performed that day. Sir John Willox, who supported the vote of thanks to the President of the Local Government Board for the interest he had taken in the new hospital, pointed out that three separate boards of guardians had sunk all jealousies and differences and had worked harmoniously in a great and humane work and had so secured to the public of Liverpool a valuable and a useful institution. The day was also auspicious from the fact that Liverpool stood in the forefront in a great philanthropic work, as this would be the first hospital of its kind in the kingdom. The new hospital would not only be a sanatorium for consumptive patients, but also an educational establishment from which they hoped cured patients would take home with them a knowledge of the principles that tended to eradicate consumption.

The City Council and the Proposed University for Liverpool.

The practical unanimity in Liverpool in regard to a separate university was evidenced at the last meeting of the city council in a striking manner, when it was resolved unanimously to apply for Parliamentary powers during the ensuing session to enable the corporation to assist in the foundation and maintenance of such an institution. The question of a large donation at once or an annual contribution may well remain for future consideration, but from the general tenor of the debate it could be seen that the latter alternative was the popular one.

Mr. Benn W. Levy and the Honorary Freedom of the City.

On Oct. 17th the honorary freedom of the city was conferred on Mr. Benn Wolfe Levy, one of the trustees of the David Lewis fund. It fell to Mr. Levy's lot to administer the large fortune acquired by the late Mr. David Lewis. The money was left to be expended at the discretion of Mr. Levy and his co-legatee, Mr. George Cohen, and seldom has a labour of love been performed with so much zeal, with so much fidelity to what was believed to be the intentions of the donor, or with a greater impartiality towards the

whole body of citizens. The David Lewis Northern Hospital, which is the chief enterprise of the David Lewis trust in Liverpool, has been equipped with every apparatus that modern science can suggest. No expense has been spared to secure the highest efficiency attainable. Mr. Levy also devoted a further portion of the David Lewis trust towards increasing the funds of the Victoria Nursing Institution, which was founded in commemoration of the Diamond Jubilee of Her late Majesty Queen Victoria.

Cyclists' and Harriers' Parade for the Benefit of the Hospitals.

The annual cyclists' and harriers' parade, which took place in the early part of the summer, was highly successful, the collection taken along the line of route having proved a record one. The sum available for distribution among the charities was £725. Since the inauguration of the parades in 1892 the cyclists and harriers of Liverpool have distributed among the various charitable institutions connected with the city £3958.

Plague in Mediterranean Ports.

In view of the reappearance of plague in certain Mediterranean ports Dr. E. W. Hope (the medical officer of health) has issued a circular letter to the profession inclosing a copy of Dr. Balfour Stewart's memorandum setting forth the diagnostic signs and symptoms of plague, similar to that forwarded from the Health Department in September, 1900.

Medical Service at St. Luke's Church.

The service arranged for medical men at St. Luke's Church on Oct. 20th was very successful. About 300 members of the profession attended, seats for whom were reserved in the centre aisle. Besides the wives and friends of the medical men present a large number of nurses occupied the gallery. The sermon was preached by the Lord Bishop, and the collection was devoted to the Medical Benevolent Fund.

Plague in Liverpool.

Official information has been received in Liverpool from the Local Government Board that two recent deaths in Everton were due to bubonic plague.

Oct. 29th.

WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

The Senghenydd Colliery Explosion.

THE inquiry by the coroner into the cause of the death of the 81 men who were killed while working underground in the Universal Pit, Senghenydd, on May 24th last when an explosion occurred was concluded on Oct. 24th. It will be remembered that only one man was rescued alive. Professor W. Galloway conclusively demonstrated a few years ago that the soft smooth coal-dust scattered over the workings is responsible for the transmission of the flame when once a mine becomes fired, and although the jury agreed that this was the case in the particular instance under investigation they found that it was not possible, owing to conflicting opinions expressed by his Majesty's Inspector of Mines and Professor Galloway, to locate the exact spot where the explosion took place. It was stated during the inquiry that there is no statutory obligation upon colliery managers to keep the workings well watered.

A Defaulting Sanitary Authority.

The Carmarthenshire County Council has decided to make a representation to the Local Government Board in accordance with the provisions of Section 299 of the Public Health Act, 1875, to the effect that the Llanelly Rural District Council has made default in enforcing the provisions of that Act. The population of the district at the last census was 24,213. That portion of the district known as Burry Port appears to be in the worst sanitary condition, but there are generally lack of drainage, insufficient water-supply, and no means of dealing with cases of infectious disease. The desirability of appointing a county medical officer of health for Carmarthenshire has upon one or two occasions been discussed by the county council, but no disposition has been shown to make such an appointment.

Sir Frederick Treves at Bristol.

The first municipal bacteriological laboratory in England was established a few years ago in Bristol by the medical officer of health (Dr. D. S. Davies) with the assistance of Dr. Walter Dowson, and on Oct. 25th Sir Frederick Treves formally opened a bacteriological department in connexion with the Bristol Royal Infirmary. Later in the day Sir Frederick Treves distributed prizes to the medical students attending University College, and in his address to the students was particularly happy when comparing the history of the successful medical practitioner with the history of the city of Bristol—a town which had made its way without natural advantages and entirely by its own energies and efforts. The annual dinner of the Bristol Medical School was afterwards held at the Royal Hotel, under the presidency of Dr. Markham Skerritt, Sir Frederick Treves being the guest of the evening. There was a large company which included the Lord Mayor and the majority of the members of the local medical profession.

The Church and Sanitation.

The question of the housing of the working-classes was discussed both at the Llandaff and at the Hereford Diocesan Conferences which were held last week, and at each gathering there was displayed by those who took part in the discussions very considerable familiarity with the duties and obligations of sanitary authorities. The address of the Rev. C. A. Treherne at Hereford was exceptionally accurate in points of detail and his exposition of the Housing of the Working Classes Act was particularly lucid. The only portion to which exception could be taken was when he advocated the relaxation of the stringency of the model by-laws relating to new buildings. These by-laws are not perfect by any means, but those who are officially connected with sanitary administration are constantly warning us that in those districts where these regulations have not been adopted, or where adopted have not been enforced, there is going on a steady manufacture of slum property which in a very few years will give us as much trouble as that which it is now replacing has done. The Bishop of Hereford suggested that every dwelling-house should be labeled with the name of its owner, who in many instances would be ashamed to be known as the owner of a house unfit for decent habitation. Not only the Bishop of Hereford, but several prominent speakers at the Llandaff conference and at Hereford spoke in strong terms of the necessity for placing the inspection of houses with reference to sanitation and overcrowding in the hands of competent officials who should live away from the districts which they inspect and should have no personal connexion with them. This is equivalent to saying that sanitary officers should not be liable to dismissal at the hands of local authorities merely for capricious or personal reasons. This expression of opinion coming from men of education occupying responsible positions will commend itself to all those who desire to see the public health service placed upon a more satisfactory footing than that upon which it is placed at present.

Brentry Inebriates' Home.

The Home Secretary has extended the certificate of this institution to allow of 50 females being admitted in addition to the 150 whom the institution is already authorised to accommodate.

Oct. 28th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

General Council of the University of Edinburgh.

THE statutory half-yearly meeting of this body was held in Edinburgh on Oct. 25th. Sir William Muir occupied the chair and there was a large attendance. Mr. F. Grant Ogilvie, director of the Museum of Science and Art, and Mr. Campbell Lorimer, advocate, were elected assessors in the University Court in place of Mr. Hope Findlay, W.S., and Mr. Taylor Innes, advocate, whose term of office had expired. The joint report by the business and finance committees was then submitted. It deals with the Carnegie Trust. It points out that the income of the fund amounts to £100,000 per annum, which sum is divided mainly between two purposes: (*a*) the increase of teaching power and facilities and (*b*) the payment of class fees of Scottish students. The joint committees under the first head of Mr. Carnegie's gift recommend the General Council to

represent to the University Court that the following are clamant needs of the university—namely:

1. The development of the work of the university in connexion with the teaching of modern languages.

2. The strengthening of the teaching staff in the medical faculty, so that subjects which have recently become of increased importance should be adequately represented.

3. The provision of suitably equipped laboratories for the instruction of students in all graduation subjects for which practical work is required.

4. The establishment of laboratories providing facilities for research in the main lines of scientific work.

5. The improvement of the library.

The next report submitted dealt with the decrease in the number of students. Both reports were adopted. Dr. Richard J. Berry then proposed the following motion of which he had given notice:—

That this council requests the University Court to inquire into the feasibility of reorganising the medical curriculum on the lines suggested by the Pathological Club of Edinburgh.

The lines referred to were practically the inclusion of the present extra-mural school in the university. This motion was remitted to the standing committees for consideration. Dr. Ernest Greville then moved:—

That returns be made showing (*a*) the number of hours spent by each professor in teaching his practical classes; (*b*) the number of hours so spent by the assistants; (*c*) the amount paid by the students for such practical classes. Voting to be by ballot.

This motion was submitted in a speech of considerable length which developed into an attack on Professor Chiene, and the speaker was several times interrupted by the chairman. The previous question having been moved, it was carried by 33 to 21 votes. At the last meeting of the General Council Dr. Greville made an attack upon the conduct of the practical classes which met with much sympathy, although it was felt that the introduction of the names of individual professors was a tactical blunder, however true the statements might be. The question raised is one of very great importance, and it is a pity that it should have been spoilt by personal references which were not essential to it, although they added a certain piquancy and produced a measure of heat on both sides.

Royal College of Surgeons of Edinburgh.

Dr. J. Halliday Croom has been elected president of this College in succession to Dr. J. Dunsmure.

Volunteer Medical Staff Corps, Glasgow Companies.

Under the guidance and direction of Surgeon-Lieutenant-Colonel G. T. Beatson, together with the enthusiastic coöperation of the other officers, the progress of the Glasgow companies of the Volunteer Medical Staff Corps has been both sustained and rapid. The organisation is now extended to five companies and candidates for admission are at all times numerous. Under the auspices of the Scottish Committee of the Red Cross Society Surgeon-Lieutenant-Colonel Beatson on Oct. 25th gave a public lecture on Ambulance Work on the Field of Battle. The interest of the occasion was increased by the presence of Major Hautonville Richardson, who explained the employment of dogs as agents for the discovery and assistance of wounded soldiers and exhibited four dogs which he had trained for this purpose. On the following day a practical demonstration of ambulance work was given on the drill-ground at Yorkhill and attracted a large number of the public. The main idea was to illustrate the surgical assistance rendered on the field of battle to a brigade in action, the organisation including the collection of wounded by a bearer company and their conveyance by successive steps to the collecting station, dressing-station, and field hospital. Surgeon-Major W. F. Somerville was in command of the bearer company. The cyclist detachment of the corps gave a special exhibition of the use of the bicycle in ambulance work, and Major Richardson's dogs proved their efficiency by discovering "wounded" who had otherwise been overlooked. The proceedings were highly successful and reflected great credit on all concerned. Many of those who took part in the demonstration have recently returned from active service in South Africa. Quartermaster Lee and Sergeant-Major Kenney are among those who have in this way taken part in ambulance work at the seat of war.

Curious Action against the Glasgow Corporation.

On Oct. 25th, at the Glasgow Sheriff Court, a claim was brought against the corporation by the landlords of some house-property. It seemed that there lately resided in the house in question a tenant against whom an ejection order had been obtained which was duly put in force. The tenant, when expelled from the flat, having no other house to which to go, sat down outside the house holding in her arms a child apparently ill. Whilst there she was spoken to by a sanitary inspector, to whom she gave the information that the child was recovering from measles. The inspector then called upon the landlords' agent and suggested that the mother and child should be permitted to return to the house, promising that if this were done he would get the house fumigated. To this the agent consented, but the sanitary authorities did not carry out the fumigation until a month had elapsed, and during this time two tenants left the property, and some vacant flats could not be let in consequence of the reputation of the house occupied by the woman. The landlords therefore claimed for the amount of rent thus lost. On the part of the corporation it was argued that no legal liability was attached to the official proceeding which had been conducted in the interests of the public health. It was urged that the statute provided that the local authority should compensate the owner only for any unnecessary damage caused to his house by disinfection, and that here no such unnecessary damage could be proved. Apart from these and other legal objections the corporation denied the accuracy of the plaintiffs' statements. The sheriff, after hearing the arguments on both sides, found for the corporation with expenses.

The Education of Crippled Children.

The School Board for Glasgow is making special provision in coöperation with the Queen Margaret Settlement Association for the education of crippled and infirm children unable to attend the ordinary schools. A special class-room has been secured and arrangements have been made to provide the children with food at a moderate charge. Private benevolence has supplied an ambulance wagon for conveying the children to and from the school, also a nurse to accompany the children and to remain with them during the day. The class at present numbers 28, and it is hoped that similar conditions can be established in various parts of the city. To accomplish this, however, the school board will require further financial assistance. Similar work carried on in London receives, it is said, a special grant, and the Glasgow board has determined to apply for a like provision.

Bequests to Glasgow Hospitals.

By the will of the late Mrs. Janet Rodger a sum of £8000 has been bequeathed to various local charities. The Royal Infirmary receives £3000, the Western Infirmary £1500, the Victoria Infirmary £1000, and Quarrier's Orphan Homes £1500. A gentleman, who prefers to remain anonymous, has presented to Greenock Infirmary an outfit of electrical apparatus, including the appliances required for the Finsen light treatment.

University of St. Andrews.

The installation of Lord Balfour of Burleigh as Chancellor of the University of St. Andrews took place on Oct. 24th in the presence of a large and brilliant assembly, which included not only the professors and many graduates of the university but also representatives from all the other Scottish seats of learning and a number of members of Parliament. After Lord Balfour had been formally installed he delivered an address in which he discussed the present position of university education. In the evening a reception was held which was attended by upwards of a thousand ladies and gentlemen. At a meeting of the University Court held on Oct. 27th a communication from the General Medical Council notifying the expiration of Professor J. B. Pettigrew's term of office as the representative of the university on the council was read and it was agreed that the appointment to the vacancy should be made at the next meeting of the court.

University College, Dundee.

An address on the Needs of the College by Dr. James Stuart, Lord Rector of the University of St. Andrews, was delivered on Oct. 25th at a large meeting of students and the general public. Dr. Stuart spoke on the relation of university education to the practical work of life, and asked that £50,000 should be raised in Dundee for the further development of the college. Lord Balfour of Burleigh, who

presided, said that it was essential to secure the foundation of a chair of German language and literature, a chair of geology, and a sub-division of the different branches of chemistry.

Oct. 29th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Prevalence of Cancer in Ireland.

THE thirty-seventh annual report of the Registrar-General for Ireland, recently issued, contains some very interesting statistics as to the increased prevalence of cancer shown by the death-rate tables for Ireland, England, and Scotland. Referring to Ireland, the report contains a most valuable coloured map showing the distribution of the disease in that country between the years 1896 and 1900. From this it appears that the mortality varies widely in the different counties, being lowest in Kerry where the rate is 2·76 per 10,000, and highest in Armagh, where the number is 10·9 per 10,000. During the year 1900 no less than 2717 deaths were attributed to cancer, being an increase of more than 60 over the number quoted for the preceding 12 months. During the last 36 years the cancer death-rate has steadily grown from 2·6 to 6·2 per 10,000. It is not any consolation to know that the state of things in England and Scotland seems to be even worse, the mortality line in Great Britain having also risen greatly during the same period. In England the rate per 10,000 has advanced since 1864 from 3·8 to 8·4; in Scotland from 4·2 to 8·2. It is difficult to see where any statistical fallacy can come in to explain away or to modify the unsatisfactory import of these figures.

National Association for the Prevention of Consumption and other Forms of Tuberculosis.

A meeting of the executive committee of the Dublin branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis was held on Oct. 26th at the house of the Royal College of Physicians of Ireland. The committee expressed great satisfaction with the course adopted by the Local Government Board in issuing the circular letters, leaflets, and posters of the association to all the sanitary authorities throughout Ireland.

Jervis-street Hospital, Dublin.

The inaugural address at Jervis-street Hospital will be delivered on Nov. 6th by Mr. Austin Meldon, D.L., when Viscount Powerscourt will preside. The lecturer will deal with the increasing prevalence of cancer.

Medical Poor-law Appointments in Ireland.

It is difficult for anyone living outside Ireland to understand how politics now enter into such an election as that of a dispensary medical officer of the Poor-law Board. Here are the facts, however, of a recent case. Newport dispensary district in co. Mayo became vacant and two candidates entered the field, Mr. P. J. Heneghan and Mr. A. Gill. The former in his application to the electors said that "he was a member of the United Irish League from the start, and whether elected or not to-day he intended to remain so. ..... He was a gold medallist of St. Vincent's Hospital and a student of the Catholic University." At the election he was proposed and seconded, his nominator putting forward a motion "that we refuse the nomination for the Newport vacancy of any doctor who is not a member of the United Irish League." This proposal was lost by only a majority of three. Father O'Toole, a priest, although not a guardian, an elector, or a member of the board, was present and asked the proposer of Mr. Heneghan if he could deny that that gentleman was a student of a Queen's College (Galway) and if he did, said the reverend father, "I will prove it." He also added that "all the priests of the deanery held a private meeting to discuss the question of a medical man for Newport and they decided by a majority in favour of Mr. Gill." It is not necessary to add that Mr. Gill was elected. Mr. Heneghan is to be condemned for introducing politics into his application, and so is his nominator, who would boycott all medical men except those who are members of the United Irish League; but what are we to think of a medical election when a non-elector who had no right to be present—a Catholic clergyman—entered the board-room and urged that a medical man should not be elected because he attended a Queen's College?

The Powers of the Local Government Board for Ireland.

On Oct. 26th, in Monaghan, a large meeting of gentlemen representative of public bodies in Ulster was held in the board-room of the workhouse, when resolutions were carried proclaiming "entire want of confidence in the Local Government Board for Ireland as at present constituted." "We are satisfied," they added, "from our experience of the board that the administration of local government in this country will remain little better than a farce until the present board disappears and a new board is created, composed of men who have a thorough knowledge of Irish local affairs." Further, "Recognising the necessity which exists for the reconstruction of the Board so that a court of appeal, where equity would be the leading characteristic and where justice would be dispensed without regard to personal or political interest, would be established, we firmly assert that the governing body in Irish affairs should be so selected and constituted that the voice and aspirations of the people should not be subjected to the system of suppression which has hitherto prevailed." A ratepayers' association, it was also decided, should be formed to impede the arbitrary authority of the Local Government Board. There is no question that all over Ireland at present there is a revolt against the system of dictation from various central boards in Dublin.

The Armagh Guardians and the Nursing Question.

The Local Government Board having written to the Armagh Guardians that they were prepared to grant an inquiry upon oath, to be held by a medical inspector, as to the manner in which the medical officer had discharged his duties, it was decided to refer the matter to a committee to report at the next meeting. This report was presented on Oct. 15th at the weekly meeting of the Armagh Board of Guardians. In this report it is said that the guardians were not aware that the medical officer had been accused of any failure in the discharge of his duties except that the Local Government Board in their letter of August 16th drew certain inferences unfavourable to him from the fact that on the date of the inspector's last visit to the workhouse the infirmary and fever hospital nurses were absent from duty for the purpose of taking air and exercise. The guardians did not deny that these nurses were absent and that there were no qualified persons in their places. For this the guardians took full and entire responsibility, as the medical officer on many occasions within the past 12 months had informed the guardians that he considered it necessary that the services of a second qualified nurse should be obtained for day duty in the infirmary. While agreeing with the medical officer that a second nurse was necessary the guardians were convinced that the appointment of an intelligent probationer nurse would be sufficient. The question of the absence of the fever hospital nurse had been fully and satisfactorily explained by the medical officer. As there could not possibly be any further facts to elicit, the committee did not see, therefore, what purpose an inquiry would serve. This report was unanimously adopted by the Armagh Guardians without discussion. The question now is—how the Local Government Board will act. There is also a discussion between the Armagh Board of Guardians and the Local Government Board on the nursing question, the guardians urging that their present staff with the addition of a probationer nurse would be sufficient for all ordinary requirements of the establishment while the Local Government Board demand the appointment of a qualified nurse and refuse to sanction the appointment of a probationer. A special meeting of the board has been called to take the whole matter into consideration.

Oct. 29th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The French Association of Urology.

THIS association, to which can belong every French specialist in diseases of the urinary organs, whether

physician or surgeon, opened its fifth annual session on Oct. 24th under the presidency of Professor Guyon. The subject for discussion was "Moveable Kidney, its Pathology and the Indications for Operative Interference."

The Medical Treatment of Adenoid Vegetations.

At a recent meeting of the Pediatric Society Dr. Lapeyre made a protest against the existing abuse of surgical measures in the treatment of adenoid vegetations during infancy and adolescence. He argued that in many cases it was quite possible, with patience, to obtain a cure by medical measures. The treatment consists in administering iodine in an alcoholic solution. At the beginning six drops are given three times a day and the dose is gradually increased until 40, 50, or even 60 drops are given per diem. Dr. Lapeyre had treated in this way 28 cases of adehoids, the patients varying from five to nine years of age. The treatment had been successful in every case and only very rarely were symptoms of iodism produced. Many of those present confirmed Dr. Lapeyre's statements and added that the internal administration of iodine, combined with local applications of menthol dissolved in oil, had in their hands given excellent results and had enabled the patient to do without surgical intervention.

Chloral Hydrate as a Vesicant.

At the meeting of the Academy of Medicine held on Oct. 8th M. Hallopeau read a paper upon some researches of M. Bonnet with regard to the vesicating properties of chloral hydrate. This drug vesicates very rapidly and is applied in the following manner. It is spread upon diachylon plaster in the proportion, according to M. Bonnet, of 3 grammes to a superficies of 12 by 15 centimetres. The plaster is then applied to the skin which has been previously anointed with almond oil or vaseline. In about 15 minutes the patient feels a sensation of warmth which increases gradually to burning. The plaster is then removed and the reddened part is covered with cottonwool. At the end of 20 or 30 minutes later a blister has risen and the patient goes to sleep—a fact which shows that with chloral hydrate, as well as with cantharides or any soluble substance, the vesicating agent is absorbed. The sleep produced by chloral hydrate is, however, less inconvenient than the cystitis produced by cantharides. It is as well to be careful all the same, particularly in the case of children, and not to make use of too large a surface of blistering plaster. The practical interest of these researches is much less than it would be had not blistering fallen into such disuse as it has. Blisters of a size capable of provoking cystitis are now hardly ever applied, and in fact they are only used of a very small size as revulsives in ophthalmology or in dermatology as in ringworm, and in such cases chloral hydrate has no particular advantage over cantharides.

The Experimental Treatment of Tetanus by the Method of Baccelli.

At the meeting of the Academy of Medicine held on Oct. 15th M. Josias laid before the gathering the results of some experimental work performed on goats. This was the method of treating tetanus to which Baccelli called the attention of the first Italian Congress of Medicine held in 1888. The method, which has often been used with success in Italy, has been but rarely tried in France. The tetanus toxin employed by M. Josias was of such a strength as to be fatal in doses of 12 centigrammes per kilogramme of body-weight of the goat. To three goats was administered a quantity of toxin of rather more than three cubic centimetres, and directly the first symptoms of tetanus appeared M. Josias gave the animals one or more subcutaneous injections of a solution of carbolic acid of a strength of 2 per cent. All the goats died, together with the control animal, at the end of four or five days, after having exhibited the usual course of tetanus. These experiments went to prove that carbolic acid exerts no action inimical to the development or course of tetanus, and, moreover, the control animal, which appeared much the more ill at the beginning, survived longer than those animals which had received the greatest quantity of carbolic acid. Although the goat can as a rule easily stand doses of from 0·40 to 0·50 of a gramme of pure carbolic acid M. Josias thought that possibly better results could be obtained with smaller doses and therefore he tried a second series of experiments. No better results were obtained. M. Josias concludes from these experiments that the Baccelli method of treatment apparently has no favourable influence for the patient upon the evolution of tetanus once the symptoms have declared themselves, and this, too, even if the treatment is begun as soon as the earliest symptoms show themselves.

An Artificial Larynx.

At the meeting of the Academy of Medicine held on Oct. 22nd, M. Le Dentu showed a most interesting case—that of a patient upon whom M. Jaboulay had performed total extirpation of the larynx. Since the operation the patient had been wearing an artificial larynx by means of which he could speak fluently. At the invitation of M. Le Dentu the patient talked and answered questions, the quality and pitch being unvarying and somewhat high. The larynx is practically a box made in hardened caoutchouc, moulded in the position of the natural larynx and fitting on the top of the trachea. An indiarubber diaphragm with a slit in the middle acts as the glottis and vibrates like it. The tension being always the same it can, however, give but one note. But, as speech is performed by the tongue the palate, and the teeth, pronunciation, although all on one note, is perfect and quite intelligible. A metal grating shuts over the upper part of the larynx and prevents the intrusion of particles of solid food when the patient eats, while fluids are prevented from entering by a circular gutter which leads by a lateral tube into the œsophagus. The patient breathes through an anterior opening like a tracheotomy tube, which is found to be more convenient than breathing through the larynx, and when he wishes to talk he closes this opening with his finger.

Oct. 28th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Swiss Universities.

THE number of medical students is still on the increase, notwithstanding the unpromising forecast as regards lucrative work after the students have obtained their degrees. The total number of students in the summer term of 1901 amounted to 1328, as compared with 1201 for the preceding year, an increase of 9 per cent. The number of students registered at the five Universities is as follows:—Berne 364, Geneva 351, Zürich 305, Lausanne 170, and Bâle 138. The majority of the students are foreigners—viz., 227 male and 490 female students; the number of the latter is considerably on the increase notwithstanding the fact that German ladies can now pass their curriculum at German universities and are admitted to their usual medical examinations. The larger number must also be attributed to the increase of Russian lady students who cannot study in their own country, to the great facilities offered for study at the Swiss universities, and also to the good quality of the clinical instruction and the great opportunities for practical work. Small universities offer these facilities more than the larger schools at Vienna, Berlin, Munich, Leipsic, and Würzburg.

Society for School Hygiene.

In the education of the masses Switzerland has for many years been in the foremost rank and ever and anon deputies from foreign countries come to study the educational facilities offered gratuitously to everybody residing in Switzerland. So much attention has been paid to education and so much time has been demanded for mental efforts that the physique of the scholars has begun to be threatened. Medical men from time to time have raised a voice of warning, but they have remained practically unheard. Hence the desirability of forming a Society for School Hygiene in which medical men and school authorities could arrive at a mutual understanding with regard to the desired limits of education *versus* physical well-being. An appeal was immediately responded to by hundreds of medical men, professors, and schoolmasters; the Federal and local authorities also took a lively interest in the formation of this society, which was founded last year and now issues its second annual report. Limits of space forbid me from entering into details, but a *résumé* of the proceedings of the July annual meeting held at Lausanne will give an idea of the work that is performed,

in which the best men have joined to protect the physical status of our juvenile world. Professor Combe of Lausanne spoke on the Etiology of Scoliosis and Dr. Scholder of the Orthopædic Institute on the Therapeutics of Scoliosis. Dr. Wilhelm Schulthess of the Zürich Orthopædic Institute read a paper on the Connexion between the Posture whilst Writing and the Deviations of the Vertebral Column. Professor Otth of Lausanne reported on the Advantages of Perpendicular Writing in comparison to the usual Slanting Method of Handwriting. Mr. E. Heuzmann, Music Director at Berne, enlarged on the Hygiene of Singing and the Rational Methods of teaching Singing in Schools, whilst Dr. Schmutziger of Aarau spoke on the Desirability of the Schools beginning later both in Summer and Winter. There is no doubt that this society, which is receiving deserved support from all sides, will continue to do good work and thus the public weal will derive great and lasting benefit.

Decrease of Mortality in Switzerland.

The Federal Statistical Office at Berne has just published a report with regard to the ratio of mortality in Switzerland from 1871 to 1890. If one considers the mortality-rate in the last decade (1891–1900) the decrease is very striking. Arranged in six groups of five years each the ratio per 10,000 has decreased as follows: 23·8, 23·1, 21·3, 20·4, 19·6, and 17·8, or a decrease of one-fourth in 30 years. This decrease is almost universal, the Cantons of Grisons and Valais being the only exceptions, but it is differently distributed over the various parts of the country. I must mention that the surplus of births over deaths from 1871 to 1890 was 7·3 per cent.

Zürich, Oct. 28th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Institute for Medical Research.

THIS institute, previously mentioned in THE LANCET,[1] has a board of managers made up as follows: Dr. William H. Welch, professor of pathology in the Johns Hopkins University, president; Dr. T. Mitchell Prudden, professor of pathology, Columbia University, vice-president; Dr. L. Emmet Holt, clinical professor of diseases of children, Columbia University, secretary; Dr. C. A. Herter, professor of pathological chemistry, University and Bellevue Medical College, treasurer; Dr. Theobald Smith, professor of comparative pathology, Harvard University; Dr. Simon Flexner, professor of pathology, University of Pennsylvania; Dr. H. M. Biggs, director of the laboratories of the Board of Health. In the summer months, aided by the institute, the milk-supply of the city was investigated and the study of the specific germ which causes outbreaks of dysentery in communities and in institutions was made. The work now taken up relates to phases of tuberculosis and typhoid fever, and other problems closely allied to the cause and prevention of other common diseases. Arrangements have been completed by which 19 persons will within about a month be working on research lines. These men, with one exception, will carry on their work in laboratories in Chicago, Philadelphia, Montreal, Ann Harbor, Boston, Baltimore, Middletown (Conn.), Cleveland, New Haven, the University of California, and in this city. The one exception is Dr. Marshall, a pupil of Dr. Welch of the Johns Hopkins University, the president of the board, who is to study in the laboratory of Professor Ehrlich, in Germany, some of the methods of the latter. Dr. Marshall received a Fellowship of the University and started for Germany some months ago. All the Fellowships and other appointments are for one year. Every person assisted from the funds of the institution is required to do a piece of original investigation and to submit a report of it to the directors of the institution for publication. Each person will receive credit for his work. Some of the communications received by the board since it began its work showed that in its endeavour to obtain tangible results it had sought as soon as possible to learn where capable men with an inclination to labour in research lines and willing to go ahead with the appliances at hand were to be found. Two reports of much public interest will soon be made to the public by the board. One is the report of the investigation of the milk-supply of the city and the other is the study of the specific germ that causes outbreaks of dysentery. A preliminary report of the milk-supply investigation has been made; a fuller statement will soon be published. What was especially gratifying to the board was that most of the leading milk-dealers and many other persons connected with either the shipping or the transportation of milk to this city were found ready to coöperate in the task of improving the milk-supply. In this investigation three workers were employed; one attended to the inspection of dairies, the hygiene of cow stables, and the handling and transportation of milk, another devoted his time to the bacteriological work, and the third studied the milk-supply of institutions in relation to the health of inmates and also did a little work on similar lines in tenement houses.

[1] THE LANCET, June 22nd, 1901, p. 1801.

Extinction of Leprosy in the Hawaiian Islands.

Superintendent Reynolds of the colony of lepers states that leprosy is being slowly, but none the less surely, eradicated in the Hawaiian Islands. Five years ago there were over 1300 inmates in the leper settlement on the Island of Molokai; when the annual visit was made a few days ago there were only 900. This is due, not so much to the scientific treatment of the disease, but to the fact that the native race is gradually dying out. Of those who are now inmates of the colony all but 50 are native Hawaiians; there are 15 whites and 30 Chinese. Last year just 100 lepers were sent to the island, but only 50 have been sent in the last nine months. In the biennial period ending December, 1900, directly after the islands had been annexed, over 500 were transferred to the settlement. This was due to the fact that the matter was taken from the hands of the party formerly in charge of such cases, and those afflicted with this disease were hurriedly sent to the place of segregation. Heretofore many such persons have remained in Honolulu through political influence.

Large Increase of Fever in New York.

The Department of Charities reports that the wards of all the city hospitals connected with the department are filled and that this condition is due to the large number of typhoid fever and malarial patients. On inquiry it was found that there were no vacant beds for new medical cases in most of the large hospitals of the city. In all of them there are certain wards for typhoid fever cases and when these are filled beds in others must be found where there is no danger of any other patient in the hospital catching the disease from those already suffering from it. To find such accommodation quickly is often a perplexing matter. Usually the beds in the surgical wards are brought closer together and the convalescing in-patients are transferred from the convalescents' wards to the surgical wards because they are better able to withstand being removed than any other patients. This expedient has been adopted in many of the city hospitals lately. The officials of the Charities Department think that the increase in fever in the city is due to the opening of the streets for the rapid transit tunnel and for other public works which require the tearing up of the streets.

An International Health Service.

The members of the United States delegation to the International Conference of American States in Mexico have issued a request for suggestions relating to the possible establishment of an international health service. The proposition is to unite all the American Republics in the prosecution of common measures for the control and final extermination of pestilential diseases, especially of yellow fever. A practicable plan for securing international coöperation for this purpose has been submitted by the Surgeon-General of the Marine Hospital Service and will doubtless form the basis of discussion. This plan is briefly as follows. An International Sanitary Commission is to be created, to consist of five members, no two of whom shall be residents or citizens of the same Republic. They shall be appointed by the Bureau of American Republics and shall serve one year, when they may be reappointed or new members may be selected to succeed them. Of these five members one shall be a diplomat, one learned in the law, one a physician and sanitarian, one a sanitary engineer, and

one a commercial representative. To these five members shall be added, temporarily, two others to represent the national government in whose domain is located the seaport city or town to be investigated or to be subject to sanitary requirements. These two members shall be appointed by the President of their Republic and shall serve only in that Republic. The duties of the International Commission shall be, first, an inquiry of a commercial character to determine upon and to prepare a list of the seaport cities or towns necessary to be visited with a view to sanitary improvement; secondly, to visit the said cities or towns in order of greatest commercial necessity and with the two additional commissioners to make a thorough sanitary inspection of the port and city or town and formally to report upon the sanitary measures deemed necessary, keeping within the limits of this convention; thirdly, this report shall be in duplicate signed by the seven members of the commission. One copy shall without delay be transmitted to the President of the Republic within whose domain the city or town inspected is located and the other copy shall be sent for file to the Bureau of American Republics. Immediately after the receipt of this report it shall be the duty of the President to whom it is sent to take such action as lies within his power, either through national, State, or municipal authority, to put into effect the measures recommended by the commission or other effective measures satisfactory to a majority of the commission of seven and so certified in writing. If one year from the date of the receipt of the report of the commission by the Bureau of American Republics work has not actually been begun, or if plans have not been prepared and contracts made, it shall be the duty of the Bureau of American Republics to notify each of the nations entering into this convention, and each of the said nations obligates itself thereupon immediately to impose upon vessels arriving from the said ports additional tonnage tax and duties upon specified imports.

The Study of Yellow Fever.

The Supervising Surgeon-General of the United States Marine Hospital Service has prepared and submitted to the Secretary of the Treasury a plan for the organisation of an association whose object it will be to collect all facts concerning yellow fever, to designate the specific lines of investigation to be made and to make the investigations. The members of the institute are to be the medical officers of the United States Marine Hospital Service and others especially qualified. They will be assigned for duty to one of four sections, each section having a special list of topics for consideration. Each of the four sections will be under the direction of one of the medical officers on duty in this bureau, and the said bureau officers, with the director of the hygienic laboratory, the Surgeon-General, and a secretary will constitute an executive board which is to have general oversight of all the investigations. This furnishes a convenient method of administration, as the machinery of the institute will be readily worked in the Bureau, while the actual labour will be carried on by members in various places. The stimulus to the members will be not only the scientific interest in the subject, but the publication of their contributions in the shape of bulletins as often as it seems advisable to the board, while the department will find the funds necessary for incidental expenses. In these circumstances it is believed that the organisation will meet with a degree of success warranting its existence.

Oct. 18th.

Obituary.

JOHN HALLILAY, L.K.Q.C.P. IREL., M.R.C.S. ENG.

BY the death of Mr. J. Hallilay, which occurred at his residence, Moorland-road, Leeds, on Oct. 21st, the medical profession of the city lose one of their oldest and most esteemed *confrères*, while a wide circle of patients deplore the removal of a trusted medical adviser and friend. Mr. Hallilay was born at Wakefield and entering Guy's Hospital attended the lectures of Bransby Cooper and Thomas Addison, who first described Addison's disease. Mr. Hallilay commenced practice in Leeds nearly half a century ago, and until a paralytic seizure compelled him to retire was a familiar figure in the life of the city. As a practitioner he was eminently safe, his judgment was sound, while his diagnosis and treatment of a case, as might be supposed from the celebrated teachers he followed, were marked by deliberation and care. Mr. Hallilay was a Churchman and in politics was a staunch Conservative. He was also an enthusiastic Freemason. For many years he acted as one of the stewards of the West Riding Medical Benevolent Fund. He was twice married and leaves a widow and three sons, two of whom follow their father's vocation. Mr. Hallilay's character was that of a simple, unostentatious gentleman, while his kindly, sympathetic, and generous disposition rendered him beloved by all who knew him.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At the Examination in Sanitary Science held in October the following candidates satisfied the examiners in both parts of the examination for the Diploma in Public Health:—

John James Buchan, Frank Marsden Burnett, Archibald Fawns Cameron, Harold Selwyn Capper, John Morton Sim Coutts, John Crawford, Frederick Dittmar, John Edward Dowling, Duncan Forbes, Grace Haxton Giffen, Kenneth Weldon Goadby, James Doig McCrindle, John Watterson Miller, William Paul Rodrigo, Paresh Ranjan Roy, Harold Robert Dacre Spitta, Hubert John Starling, John Stoddart, Hackworth Stuart, Alfred Jefferis Turner, Douglas Percival Watson, and William Wright.

AT the meeting of the Plymouth School Board held on Oct. 22nd Dr. W. Cheyne Wilson was unanimously elected to fill a vacancy on the Plymouth School Board.

THE LATE MR. JOHN GRIFFITH.—The *St. Mary's Hospital Gazette* for October publishes as a supplement a very good portrait of the late Mr. John Griffith, the ophthalmological assistant to the hospital, whose untimely death we recorded with regret in our columns recently.

PRESENTATIONS.—At a dinner held in Bristol on Oct. 18th the members of the Netham branch of the St. John Ambulance Association presented Dr. James Young with a silver cigarette case, suitably inscribed, as a mark of appreciation for his services as honorary lecturer of the class.—Mr. E. B. Fuller, M.B., Edin., late medical officer of health of Cape Town, was recently presented by the staff of the sanitary department of Cape Town with a clock in recognition of his long connexion with the city and of his unremitting work during the recent plague epidemic

EPSOM COLLEGE.—The enlarged laboratory and lecture theatre, the cost of the extension of which has been partly defrayed out of a legacy of £500 from the late Mr. Maddock, a master at the College, were formally opened on Saturday, Oct. 19th, when there was a large gathering of friends of the College. Amongst those present were Sir W. S. Church, Bart., President of the Royal College of Physicians of London, Dr. Holman (treasurer), the Rev. E. W. Northey, Mr. Christopher Heath, Mr. H. M. Macpherson, Mr. E. K. Robinson, Dr. M. Baines, Dr. S. Felce, Dr. J. H. Galton, Mr. H. W. Kiallmark, Dr. F. Needham, Mr. Bilton Pollard, Mr. C. L. Smiles, Mr. H. E. Vardon, and Colonel Gordon Watson. Before the proceedings commenced Dr. Holman, who has taken the keenest interest in the extensions, entertained a large party at luncheon at the "Spread Eagle," after which his guests were driven to the College to inspect the new lower school, the enlarged chapel, and the newly-fitted laboratory. After a few words from the head-master in the big school-room the visitors adjourned to the new lecture theatre, where the deputy chairman of the council, the Rev. E. W. Northey, in declaring the buildings to be open, observed that the extensions would not only be of the greatest possible use to the head-master but would also be a memorial to Mr. Maddock. He drew attention to the difference between the teaching of science in these days as compared with the instruction given in his younger days. The head-master referred to the great

need there had been for the additions which had just been made and thanked the council in the name of the school for the well-equipped laboratory which contained numberless devices and inventions for saving time and trouble. Mr. Robinson, the late Mr. Maddock's executor, expressed his pleasure that the council had devoted the legacy from his friend to so useful a purpose. The visitors then went over the laboratory and inspected the fittings, apparatus, benches, &c., general satisfaction being expressed with the increased accommodation and means provided for scientific teaching.

THE LATE MR. B. C. KENDALL.—Mr. Bernard Charles Kendall died at his residence, Helston, Cornwall, on Oct. 24th from acute laryngitis, after a short illness, in his thirty-sixth year. He received his medical education at the Bristol Medical School and Guy's Hospital, and became qualified as L.R.C.P. Lond. and M.R.C.S. Eng. in 1892. After holding a resident appointment at the Bristol Royal Infirmary he commenced practice at Helston, and three years ago he was returned at the head of the poll for the Helston Town Council.

LITERARY INTELLIGENCE. — Messrs. Charles Griffin and Co. have arranged for the publication of "The Work of the Digestive Glands," by Professor Pawlow, of St. Petersburg, translated into English by W. H. Thompson, M.D., M.Ch. R.U.I., F.R.C.S. Eng., Dunville Professor of Physiology, Queen's College, Belfast, and Examiner in Physiology, Royal College of Surgeons of England and Royal University, Ireland. Professor Pawlow's researches were recently awarded the Nobel prize of £11,000. This edition, which will include the notes of the most recent researches of Professor Pawlow and will constitute the sole authorised edition for England and America, is ready for immediate issue.

BORIC ACID IN BUTTER. — Messrs. Pearks, Gunston, and Tee, grocers, having appealed against a fine of £50 inflicted for selling butter containing boric acid the case was heard at Folkestone Quarter Sessions before the Recorder, Mr. Lewis Coward. The only witness called was Dr. M. K. Robinson, medical officer of health of the East Kent combined district, who was of opinion that boric acid taken constantly in small quantities was prejudicial to health. In the cross-examination counsel for the appellants made use of the fact that boric acid was alleged to be harmless by Professor Liebreich of Berlin University, Professor Chittenden of Yale University, and Professor Tunnicliffe of King's College, London. The Recorder, having been informed that these authorities had not been quoted before the justices, thereupon quashed the conviction.

FREEMASONRY.—*The Middlesex Hospital Lodge, No. 2843.*—A meeting of this lodge was held on Oct. 17th at Freemasons' Hall, W. Bro. T. G. A. Burns, M.R.C.S. Eng., being in the chair. Bros. Baldwin, Milburn, Dutton, Noel, and Mulvey were admitted to the second degree. Mr. D. B. Balding, F.R.C.S. Eng., Mr. Campbell Thomson, M.D. Lond., and Mr. Peter Thompson, F.R.C.S., were initiated into Freemasonry, and Bros. Lionel Litchfield Preston, M.B., B.S. Durh., M.R.C.S. Eng., and Philip Barnett Bentlif, M.R.C.S. Eng., were unanimously elected Joining Members of the lodge. The brethren and guests afterwards dined together. *The Cavendish Lodge, No. 2620.*—The Cavendish Lodge met on Oct. 16th, at the Royal Palace Hotel, Kensington. Dr. J. Allan (Chislehurst) and Mr. Chaldecott (London) were admitted into Freemasonry by the W. M. (Bro. Bidwell), and afterwards the Installation ceremony took place, Bro. Percy Dunn, being the W.M. for the ensuing year. The ceremony was performed by W. Bro. Bidwell. A Past Master's jewel was then presented to W. Bro. Bidwell. The W.M. next invested his officers, as follows: I.P.M., W. Bro. Bidwell; S.W., Bro. Menzies; J.W., Bro. Cathcart; Treasurer, Bro. Gunton Alderton; Secretary, W. Bro. Mortimer; Organist, Bro. W. Nicholl; S.D., Bro. Tuke; J.D., Bro. Handfield Jones; I.G., Bro. McCann; Steward, Bro. Victor Corbould. The brethren afterwards dined together, the members and guests present exceeding 40 in number.

BEQUESTS AND DONATIONS TO HOSPITALS.—By the will of Mr. Thomas Edward Wheatley of Norham-lodge, Oxford, £500 each are left to the Manchester Royal Infirmary and St. Mary's Hospital, Manchester.—By hi will Mr. John Hatchell of Fortifield House, Ferenure, Dublin, bequeathed £500 each to the King's Hospital, the Meath Hospital and County Dublin Infirmary, and the Dublin Royal Hospital for Incurables, £100 each to the Adelaide Hospital and the Fever Hospital, and £50 each to the Harold's Cross Refuge for the Dying, the Children's Hospital, and the Hospital for Consumption.—By the will of Mr. James Plumbridge of Glen Lynn, South Croydon, the Croydon General Hospital receives £200 and the reversion of a further sum of £200, and the Miller Hospital at Greenwich £200.—By the will of Miss Isabella Manbey of Brighton personalty of the net value of £27,321 14*s.* 6*d.* is bequeathed in trust for the Sussex County Hospital, the Brighton and Hove Dispensary, and three other institutions. From the residue of the estate a further sum of £1000 is left to the Sussex County Hospital.—The Paddington-green Children's Hospital has received from its chairman and treasurer, Mr. George Hanbury, a donation of £100 for current expenses and £200 towards the purchase money required for the new convalescent home, Fair View, Slough—namely, £1200.—The Royal Free Hospital has received a donation of £1000 from George Courtauld to endow a bed in memory of his daughter, the late Miss Louise Courtauld.—The High Sheriff of Gloucester (Mr. J. Bruton) has given £50 to the Gloucester Infirmary in lieu of the customary banquet to members of the corporation.

BOOKS, ETC., RECEIVED.

ALLEN, GEORGE, 156, Charing-cross-road, W.C.

An Idler's Calendar: Open-air Sketches and Studies. By G. L. Apperson. Price 3*s.* 6*d.* net.

Society Snapshots taken at Random on a Trip through the World. By Cotsford Dick, author of "The Model, and other Verses," "The Ways of the World" (Vers de Société). Price 6*s.*

CHURCHILL, J. & A., 7, Great Marlborough-street, W.

A Short Practice of Midwifery, embodying the Treatment Adopted in the Rotunda Hospital, Dublin. By Henry Jellett, B.A., M.D., B.Ch., B.A.O. Dublin Univ., F.R.C.P.Irel., L.M. With a Preface by W. J. Smyly, M.D. T.C.D., F.R.C.P.Irel. Third edition, revised and enlarged. Price 8*s.* 6*d.*

The Pharmacopœia of the Hospital for Diseases of the Throat, Nose, and Ear, Golden-square. Edited by H. Lambert Lack, M.D. Lond., and Charles A. Parker, F.R.C.S. Edin. Sixth edition. Price 2*s.* 6*d.*

DEUTICKE, FRANZ, Leipzig and Vienna.

Die Syringomyelie. A Monograph by Dr. Herman Schlesinger, Privat-docent, Neurologisches Institut, Vienna University. Second revised and enlarged edition. Price M. 17.

G. P. PUTNAM'S SONS, New York and London.

The Care of the Consumptive. A Consideration of the Scientific Use of Natural Therapeutic Agencies in the Prevention and Cure of Consumption; together with a Chapter on Colorado as a Resort for Invalids. By Charles Fox Gardiner, M.D., of New York. Price not stated.

HOEPLI, ULRICO, Milan.

L'Epilessia. Eziologia, Patogenesi, Cura. By Dr. Paolo Pini. Price L. 2.50.

Chimica Clinica. By Dr. Raffaele Supino of Pisa. Price L. 2.

KEGAN PAUL, TRENCH, TRUBNER, AND CO., Limited, Charing-cross-road, W.C.

Proceedings of the Society for Psychical Research, Part XLI., vol. xvi. October, 1891. Price 10*s.*

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.

A Text-book on Practical Obstetrics. By Egbert H. Grandin, M.D., Gynæcologist to the Columbus Hospital, &c., with the collaboration of George W. Jarman, M.D., Instructor in Gynæcology in the Medical Department of the Columbia University, &c. Third edition, revised and enlarged. Price 18*s.*

Clinical Pathology of the Blood. By James Ewing, A.M., M.D., Professor of Pathology in Cornell University Medical College, New York City. Price 18*s.*

Diseases of the Intestines. By Dr. I. Boas, Specialist for Gastro-intestinal Diseases in Berlin. Authorised translation from the first German edition, with special additions by Seymour Basch, M.D., New York City. Price 21*s.*

Diseases of the Nose and Throat. By J. Price-Brown, M.B., L.R.C.P.E., Member of the College of Physicians and Surgeons, Ontario, &c. Price 16*s.*

The Care and Feeding of Children: A Catechism for the Use of Mothers and Children's Nurses. By L. Emmett Holt, M.D., Professor of Diseases of Children in the New York Polyclinic, &c. Second edition, revised and enlarged. Price 2s. 6d.

Voice-Building and Tone-Placing, showing a New Method of Relieving Injured Vocal Cords by Tone Exercises. By H. Holbrook Curtis, Ph.B., M.D., Fellow of the New York Academy of Medicine, &c. Price 7s. 6d.

The Principles and Practice of Medicine. Designed for the Use of Practitioners and Students of Medicine. By William Osler, M.D., F.R.S., F.R.C.P. Lond., &c. Fourth edition. Price 18s. net.

Pharmacopedia: a Commentary on the British Pharmacopœia, 1898. By Edmund White, B.Sc. Lond., F.I.C., Pharmaceutist to St. Thomas's Hospital, London, and John Humphrey. Price 14s. net.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, E.C.

Intuitive Suggestion: a New Theory of the Evolution of Mind. By J. W. Thomas, F.I.C., F.C.S., Author of "Spiritual Law in the Natural World," &c. Price 3s. 6d. net.

Elementary Practical Hygiene (Section I.). By William S. Furneaux, author of "Human Physiology," "Elementary Chemistry," &c. Price 2s. 6d.

MACMILLAN AND CO., Limited, London and New York.

Columbia University Biological Series VI.: the Protozoa. By Gary N. Calkins, Ph.D., Instructor in Zoology, Columbia University. Edited by Henry Fairfield Osborn, Sc.D., Princeton, and Edmund B. Wilson, Ph.D., J.H.U. Price 12s. 6d. net.

MALOINE, A., 23, 25, rue de l'Ecole de Médecine, Paris.

A Travers la Médecine (21 Short Papers on Various Matters). By Dr. Henri Guimbail. Price not stated.

La Faiblesse Irritative Sexuelle. Etude Psycho-Physiologico-Médicale. By V. Renza. Price 2 fr. 50 c.

PARTRIDGE, S.W, AND CO., 8 and 9, Paternoster-row, E.C.

Surgeons and their Wonderful Discoveries. By F. M. Holmes, author of "Chemists and their Wonders," &c. Price 1s. 6d.

REBMAN, LIMITED, 129, Shaftesbury-avenue, W.C.

Diseases of the Intestines, their Special Pathology, Diagnosis, and Treatment. By John C. Hemmeter, M.D., Philos. D., Professor in the Medical Department of the University of Maryland, &c. In two volumes. Price 50s. net.

Diseases of the Digestive Organs in Infancy and Childhood, with Chapters on the Diet and General Management of Children, and Massage in Pediatrics. By Louis Starr, M.D., late Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, &c. Third edition, rewritten and enlarged. Price 12s. 6d. net.

RENSHAW, HENRY, 356, Strand, W.C.

A Dictionary of Treatment, or Therapeutic Index, including Medical and Surgical Therapeutics. By William Whitla, M.A., M.D.R.U.I. Fourth edition. Price 16s.

SAMPSON LOW, MARSTON, AND CO., LIMITED, St. Dunstan's House, Fetter-lane, E.C.

Madeira and the Canary Islands, with the Azores: a Practical and Complete Guide for the Use of Invalids and Tourists. By A. Samler Brown. Sixth, revised, edition. Price 2s. 6d.

SAUNDERS, W. B, AND CO., Philadelphia and London.

A Laboratory Course in Bacteriology. For the use of Medical, Agricultural, and Industrial Students. By Frederic P. Gorham, A.M., Associate Professor of Biology, Brown University, &c. Price 5s.

Atlas and Epitome of Special Pathologic Histology. By Docent Dr. Hermann Dürck of Munich. Authorised translation from the German. Edited by Ludvig Hektoen, M.D., Professor of Pathology, Rush Medical College, Chicago. In two parts. Part II. Price 13s. net.

Dose-book and Manual of Prescription-writing. By E. Q. Thornton, M.D., Ph.G., Demonstrator of Therapeutics, Jefferson Medical College of Philadelphia. Second edition, revised and enlarged. Price 6s. 6d.

Nervous and Mental Diseases. By Archibald Church, M.D., of Chicago, and Frederick Peterson, M.D., President of the State Commission in Lunacy, New York, &c. Third edition, thoroughly revised. Price 21s.

The Principles of Hygiene: A Practical Manual for Students, Physicians, and Health Officers. By D. H. Bergey, A.M., M.D., first assistant, Laboratory of Hygiene, University of Pennsylvania. Price not stated.

UNIVERSITY PRESS OF LIVERPOOL.

The Thompson Yates Laboratories Report, Vol. iv., Part I., 1901, Edited by Rubert Boyce, C. S. Sherrington, and Others. Price 7s. 6d. net.

Report of the Malaria Expedition to Nigeria of the Liverpool School of Tropical Medicine and Medical Parasitology. Part II.: Filariasis. By H. E. Annett, M.D., D.P.H. Vict., J. Everett Dutton, M.B., B.Ch. Vict., and J. H. Elliott, M.D. Tor. Price 10s. 6d. net.

UNWIN, T. FISHER, Paternoster-square, E.C.

Alcoholism: a Study in Heredity. By G. Archdall Reid, M.B., C.M., F.R.S. Edin. Price 6s.

VAIL, J. H., AND CO., New York.

Peru History of Coca, "The Divine Plant" of the Incas. By W. Golden Mortimer, M.D. Price $5.

WARNE, FREDERICK, AND CO., London and New York.

Diet in Relation to Age and Activity, with Hints concerning Habits Conducing to Longevity. By Sir Henry Thompson, Bart., F.R.C.S. Eng., M.B. Lond., &c. Revised and enlarged edition. Price 2s. 6d.

WHITE, FLORENCE, 34, 35, and 36, Fleet-street, E.C.

Small-pox: its Prevention, Treatment, and History. Price 6d.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ARMOUR, T. R. W., M.B., has been appointed House Surgeon to the Hospital for Women, Liverpool, vice W. J. Jones, M.B., M.R.C.S., resigned.

CALTHROP, GORDON, M.B., B.C. Camb., has been appointed Certifying Surgeon under the Factory Acts to the Wells District of Norfolk.

DONALD, F., M.R.C.S. Eng., L.S.A., has been re-appointed Medical Officer of Health for the Ham Urban District.

FALCONER, DONALD GORDON, M.B., M.S. Aberd., has been appointed Certifying Surgeon under the Factory Acts for the Foyers District of Inverness-shire.

FARQUHARSON, A. C., M.B., M.S. Glasg., has been appointed Medical Officer of Health for the Auckland Rural District.

GARDINER, PETER, M.D., C.M. Glasg., D.P.H. Lond., has been appointed Honorary Medical Officer to the Camborne Dispensary.

GREY, T. CAMPBELL, F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Medical Officer to the Camborne Dispensary.

HAWTHORNE, C. O., M.D., M.R.C.P., has been appointed Assistant Physician to the North-West London Hospital.

HUNT, E. L., has been appointed Certifying Surgeon under the Factory Acts for the Sherston District of Wilts.

LANCASHIRE, GEORGE H., M.R.C.S. Eng., L.R.C.P. Lond., M.D. Brux., has been appointed Assistant Physician to the Manchester and Salford Hospital for Skin Diseases.

MORRIS, T. H. P., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Acts for the Halesworth District of Suffolk.

SLADEN, REGINALD J. LAMBART, M.R.C.S., L.R.C.P. Lond., has been appointed Senior Resident Surgeon to the Royal Sea Bathing Hospital, Margate.

SPENCE, JOHN W. L., L.R.C.P., L.R.C.S. Edin., has been appointed Clinical Assistant to the Electrical Department of the Royal Infirmary, Edinburgh.

THOMAS, J. TELFER, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Camborne (Cornwall) Dispensary.

WHITTINGTON, C. E., L.S.A., M.R.C.S., has been appointed Certifying Surgeon under the Factory Acts for the Tuxford District of Notts.

WILLEY, FLORENCE ELIZABETH, M.B., B.Sc. Lond., has been appointed Assistant House Surgeon to the Free Hospital, Gray's Inn-road.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNWOOD HOUSE HOSPITAL FOR THE INSANE, Gloucester.—Junior Assistant Medical Officer. Salary £150 per annum, rising to £170.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

BRACEBRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer, unmarried. Salary £125 per annum, with apartments, board, attendance, &c.

BRADFIELD UNION.—Medical Officer and Public Vaccinator. Salary £53, and fees amounting approximately to £35 per annum. Also Medical Officer for the Workhouse, Bradfield. Salary £80 per annum.

BRENTFORD UNION.—Assistant Medical Superintendent of the Infirmary and Assistant Medical Officer of the Workhouse and Schools at Isleworth. Salary £100 per annum, with apartments, rations, washing, &c.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Registrar. Honorarium 20 guineas per annum.

COUNTY ASYLUM, Mickleover, Derby.—Senior Assistant Medical Officer. Salary £130, rising to £150 per annum, with apartments, board, washing, and attendance. Also Junior Assistant Medical Officer. Salary £110, rising to £130 per annum, with apartments, board, washing, and attendance.

COUNTY ASYLUM, Lancaster.—Assistant Medical Officer, unmarried. Salary £150, increasing to £200, and on promotion to £250, with apartments, board, washing, and attendance.

COUNTY ASYLUM, Prestwich, Manchester.—Junior Assistant Medical Officer, unmarried. Salary £150, increasing to £250, with board, apartments, and washing.

DOVER HOSPITAL.—House Surgeon, unmarried. Salary £100 a year, with board, lodging, and washing.

EDAY, ORKNEY.—Medical Officer. Salary £50 per annum, with other emoluments.

ESSEX COUNTY ASYLUM, Brentwood.—Fourth Assistant Medical Officer. Salary £150 per annum.

GREAT NORTHERN CENTRAL HOSPITAL.—Surgeon to Out-patients.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House Surgeon. Salary £80 per annum, with board, lodging, and washing.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £75 per annum, with residence, board, and washing.

ITALIAN HOSPITAL, Queen-square, London, W.C.—Honorary Surgeon.

LINCOLN COUNTY HOSPITAL.—Senior House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

LONDON HOSPITAL, Whitechapel, E.—Aural Surgeon.

LONDON HOSPITAL MEDICAL COLLEGE.—Assistant to the Bacteriologist and Lecturer on Bacteriology.

LONDON TEMPERANCE HOSPITAL, N.W.—Medical Officer for six months. Honorarium at the rate of 50 guineas per annum, with board and residence.

RURAL DISTRICTS IN THE COUNTIES OF LEICESTER, RUTLAND, AND WARWICK.—Medical Officer of Health. Salary £360 per annum (inclusive of travelling and other expenses).

SALISBURY INFIRMARY.—House Physician under 30 years of age and unmarried. Salary £75 per annum, with board, lodging, and washing.

SOMERSET AND BATH LUNATIC ASYLUM, Cotford, Taunton.—Assistant Medical Officer, single. Salary £150 per annum, with apartments, board, and washing.

STIRLING DISTRICT ASYLUM, Larbert, N.B.—Assistant Medical Officer. Salary £150, with board, laundry, &c.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, London, E.C.—Honorary Physician.

WEST RIDING ASYLUM, Wakefield.—Locum Tenens for three months. Salary £3 3s. per week, with apartments and board.

The Chief Inspector of Factories, Home Office, London, S.W., gives notice under the Factory Acts of vacancies for Certifying Surgeons at West Drayton, in the county of Middlesex; at Messrs. Curtis and Harvey's Powder Mills, at Hounslow and East Bedfont, in the county of Middlesex; at Rainham, in the county of Essex; and at Kirkintilloch, in the county of Dumbarton.

Births, Marriages, and Deaths.

BIRTHS.

PHILLIPS.—On Oct. 24th, at Bedford-place, Sidmouth, the wife of F. Addison Phillips, M.R.C.S., L.R.C.P. Lond., of a son.

WILLIAMS.—On Oct. 28th, at Rotorua, Harrow-on-the-Hill, the wife of Dr. A. H. Williams, of a son. New Zealand papers please copy.

WOODHEAD.—On the 27th inst., at Chisholme, Sale, Cheshire, to Dr. and Mrs. H. Miall Woodhead, a daughter.

MARRIAGE.

ANDERSON—RICHARDSON.—At Holy Trinity Church, Pitlochry, on the 23rd inst., by the Very Rev. the Dean of Brechin, assisted by the Rev. Canon Bowstead, Kilmaveonaig, John Anderson, M.B., C.M.Edin., to Catherine Mary, only daughter of Captain and Mrs. Richardson, Castle Leigh. No cards.

DEATHS.

BUTLER.—On Oct. 27th, at Millom, Cumberland, Leonora, youngest daughter of Percy Butler and Mary Stoney, aged 20 years.

NEWBOLT.—Oct. 29th, at 42, Catherine-street, Liverpool, in her 37th year, Mary Jane, wife of George Newbolt, M.B., F.R.C.S.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE CONSEQUENCES OF AN ERRONEOUS DIAGNOSIS.

ON Oct. 23rd Mr. R. B. Rodd, the coroner for the county of Devonshire, resumed an inquest into the circumstances connected with the death of Francis Evans of Quarry-street, Stonehouse. At the previous hearing the daughter of the deceased stated that on August 17th her father had stumbled while crossing the room and had fallen against the dresser, hurting his side. Mr. W. H. Waterfield was called in, and, according to the daughter, stated that Evans was suffering from a cold in the kidneys, pleurisy, and inflammation. Three weeks later Mr. Leah was called in; he stated in evidence that on Sept. 1st he found deceased suffering from a fractured rib on the right side. Bandages were applied and the patient got better. On Oct. 5th Mr. Leah was again called in and found Evans suffering from congestion of the lungs. Death took place "on Saturday"—we presume Oct. 12th—from pneumonia, accelerated by the fractured rib. The inquiry was then adjourned to enable a post-mortem examination to be made and also to give Mr. Waterfield the chance of making a statement. At the adjourned inquest Mr. Leah said that he had made an examination of the body in the presence of Mr. Waterfield. There was no fracture of the ribs. There were pleurisy with adhesions and pneumonia of the right lung. There was also gangrene of the right lung. The kidneys were waterlogged, probably due to septic poisoning from the pulmonary gangrene. There was evidence of bruising over the fifth, sixth, and seventh ribs. Mr. Waterfield deposed that deceased came to him on Saturday, August 24th. He was suffering from pneumonia of both lungs and pleurisy of the left lung in addition. Witness told him to go home, to go to bed, and to be well poulticed. He was not to leave his bed until he got better. Witness asked if he should call the following day, but deceased said "No." Witness called on August 26th and 28th and found deceased better. He did not see him professionally again, but later witness saw deceased walking about in the street. Neither deceased nor his daughter said anything about any injury. Witness was present at the post-mortem examination. There was no fracture of the ribs or any sign of such, but there were pleuritic adhesions over three of the ribs. There were signs of syphilis both internal and external. There were no signs of any external injury over the ribs. In his opinion deceased died from pneumonia, pleurisy, and the general condition due to drink, syphilis, and exposure. The jury brought in a verdict of "Death from natural causes," adding as a rider, "We are of opinion that the inquiry was quite unnecessary and was brought about by an error of judgment on the part of Mr. Leah, and we exonerate Mr. Waterfield from all blame." With this verdict we quite agree. Mr. Leah obviously made a mistake in his diagnosis—a mistake, however, which had no influence on the case either for good or for evil. But according to the question of a juryman at the inquiry on Oct. 23rd Mr. Leah appears at the former inquiry to have attributed negligence to Mr. Waterfield and to have implied that his failure to diagnose the fracture (which did not exist) had imperilled Evans's chance of getting well. It is better, perhaps, to say that a patient has a fractured rib when he has not than to make the converse error; but to attribute negligence to a fellow practitioner for not finding a condition which is not there is, to say the least, unprofessional. Evans was evidently a bad subject for any disease, and for a man in his condition to go "about the streets and into public-houses," to quote the coroner, is to court death.

HOME FOR ILLEGITIMATE INFANTS.

To the Editors of THE LANCET.

SIRS,—Can you, or any of your readers, tell me of an institution in which an illegitimate infant would be kept? The mother is poor, but belongs to a respectable family, and we want to save the friends from the exposure if possible. I am, Sirs, yours faithfully,

Oct. 28th, 1901. ACCOUCHEUR.

WANTED—A HOME.

To the Editors of THE LANCET.

SIRS,—Could you, or any of your readers, inform me of a suitable home for a blind woman, about 50 years of age? She could afford up to 15s. per week. I am, Sirs, yours faithfully,

Oct. 27th, 1901. J. P.

"A COMMISSION OFFERED."

IN THE LANCET of Oct. 27th, 1900, p. 1250, we drew attention to the improper methods of the Century Thermal Bath Cabinet Company. This company has now started an "Eastern Branch," the address of which is Arbour-street, E., and from a circular sent out, and signed "H. A. Spurling," we learn that medical men are offered a commission of 10s. 6d. on every cabinet ordered from the Eastern Branch on their recommendation by their clients and friends. The pictures of young women "cooling off" still accompany the circular and there is also a list of "only a few of the hundreds of physicians who are using the

Century Thermal Bath Cabinet in their own families, many of whom are recommending it to their patients." We wonder whether all the physicians whose names appear in this list have been bribed in the way above indicated, and although we do not suppose that such is the case, still, anybody allowing his name to appear in such a list lays himself open to the suspicion of having accepted 10s. 6d. per Century Thermal Bath Cabinet sold through his recommendation. We can only advise all medical men to have nothing to do with a company which employs such questionable methods to increase its trade.

THE UNQUALIFIED ASSISTANT.

To the Editors of THE LANCET.

SIRS,—I beg to inclose a cutting from the *Daily Mail* of Oct. 23rd by which you will see that Judge French decided that the employment of an unqualified assistant is not an illegal act. As this decision seems quite the opposite from the last issue from the General Medical Council in which the employment of unqualified assistants has been made a penal offence, I should, in the interest of the profession at large, be obliged if you would in your next issue inform me whether (1) this ruling will stand as a precedent in case of defence; and (2) whether the passing of that Act forbidding the employment of an unqualified assistant by the General Medical Council has been obtained by a special Act of Parliament.—I am, Sirs, yours faithfully,

Pyrland-road, N., Oct. 28th, 1901. M. BLOK.

*** According to the *Daily Mail* in an action in which a medical practitioner sued for fees for services rendered by his unqualified assistant to the defendant His Honour Judge French said that the medical practitioner was entitled only to fees for his own visits, although it was not illegal for him to employ an unqualified assistant, provided that the assistant was not held out to be a qualified medical practitioner. There appears to be a confusion in the mind of our correspondent, Mr. Blok, between that which is an infringement of the law of the land, dealt with as such before a judge or magistrate (as, e.g., when an unqualified person wilfully and falsely pretends that he is a registered medical practitioner) and that which is an infringement of the etiquette of the medical profession dealt with as such by the General Medical Council (as, e.g., when a medical practitioner advertises, or, to take our correspondent's example, when he employs an unqualified assistant). Only a registered medical practitioner is entitled to recover fees for medical and surgical attendance, and it naturally follows that he cannot recover fees in respect of work done by an assistant which the assistant would not be able to recover for himself. The employment of an unqualified person to practise medicine could hardly be made illegal without making unqualified practice illegal in itself, of which at present there appears to be no prospect, but the employment of an unqualified assistant to compound or dispense poisons by a medical man keeping an open surgery is illegal under the Pharmacy Acts.—ED. L.

FREE TRADE IN VENEREAL DISEASE.

THE following lines were picked up in the board-room of a hospital and evidently refer to certain active demonstrations in the cause of purity which we have had before now occasion to find fault with in THE LANCET.

Contagious diseases
Some ladies it pleases
To take as their hobby,
And rail at a Bobby
When duty compels him
And Parliament tells him
To take up a lady
Whose habits are shady;
And make an inspection,
Despite her objection,
Whereby, if infected,
She's promptly detected,
And placed in seclusion
Until the conclusion
Of indisposition
Has made her condition
No longer a terror
To youth in its error.

They say, "It were better
To look on and let her
Spread loathsome contagion,
That so it may rage on
And prove a prevention
To vicious intention!"

But Physical Evil,
The child of the Devil,
Was never intended
With Good to be blended.
So, "Good doctor, detain her!
Good Guardians, maintain her!
Till taint of pollution
Is lost in ablution."

Methinks, if the ladies
Whose mission or trade is
To stump on a platform
Would argue in *that* form,
Why, a healthier nation
Would bless their vocation!

THE TREATMENT OF THE DROWNED.

To the Editors of THE LANCET.

SIRS,—I have carefully studied the lectures in the June and July issues of THE LANCET of this year, delivered by Dr. Bowles. Not knowing where to get a description of the Marshall Hall method of resuscitation of the drowned I trust you will be kind enough either to send me a copy of the instructions or the address where I could obtain one. Perhaps one of your readers will give me the information.

I am, Sirs, yours faithfully,

Oct. 24th, 1901. P. T.

ADVERTISEMENT.

To the Editors of THE LANCET.

SIRS,—You have exerted yourselves so frequently in attempting to protect the profession from the annoyance of receiving offensive circulars by post, that I venture to draw your attention to the worst example of this kind of advertising that I have yet seen. Some days ago I received by book post, and inclosed only in an ordinary wrapper, a pamphlet entitled, "The Radical Treatment of Piles and Prolapsus Ani," purporting to be written by a Dublin hospital surgeon whose name and distinctions it bears. On the title-page is written my name, "with the author's kind regards," and on glancing down the page I find the date of publication to be 1899. As the author is entirely unknown to me personally I am quite at a loss to know why I should be the recipient of his kind regards and 12-year old pamphlet, unless it be due merely to the fact of my name being in the Directory. I should say that the circular was addressed not to my professional but to my family address.

I am, Sirs, yours faithfully,

Oct. 29th, 1901. A DUBLIN PHYSICIAN.

THE OBLIGATION TO ATTEND A CASE.

A CORRESPONDENT sends us the following two questions:—(1) Can a medical man refuse to attend a case if his fee is offered? and is he liable for damages if it is proved that death is caused through his non-attendance, there having been no previous engagement? (2) Is there any law or rule of the General Medical Council to compel a medical man to attend in a case of emergency? The answers are:—(1) A medical man is at liberty to refuse to attend a case, but he should never do so for any trivial reason or unless he knows that the case cannot possibly be serious. (2) The answer to the first question applies to the second.

HER MAJESTY QUEEN ALEXANDRA has consented to become patroness of the St. Mary's Hospital for Sick Children at Plaistow.

S. E. S.—Generally speaking Florida has an excellent climate and is much used as a winter resort by invalids from the Northern States of America. St. Augustine on the east is one of the chief resorts and the climate there is similar to that of Italy and the south of France. The hotel accommodation is, we believe, fairly good. Jacksonville is the chief distributing centre of commerce between Florida and the North. A certificate of satisfactory examination by the State (or a district) board of medical examiners is necessary. Diplomas confer no right to practise.

H. B. will find that the question that he asks was answered in the current Students' Number, THE LANCET of Sept. 7th, 1901.

Subscriber.—Our correspondent will find a list of books in the Students' Number of THE LANCET, Sept. 7th, 1901, pp. 634 to 636.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

WEDNESDAY (6th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

THURSDAY (7th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

FRIDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.).

SATURDAY (9th).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (5th).—PATHOLOGICAL SOCIETY OF LONDON (Jenner Institute of Preventive Medicine).—8 P.M. Laboratoy Meeting. Dr. A. Macfadyen and Mr. S. Rowland: (1) Investigations on Intracellular Constituents; (2) Demonstration of Methods of obtaining Intracellular Constituents; (3) Some Results already obtained as regards the Bacillus Typhosus.—Mr. A. Moore: The Isolation of the Typhoid Bacillus.—Mr. G. F. Petrie: The Hæmolysis of Bacillus Pyocyaneus.—Mr. J. B. Leathes: (1) On the so-called Mucous Intestinal Casts (Mucous Colitis); (2) On the Products of Splenic Proteolysis.—Mr. A. Harden: On Isotonic Culture Media.—Mr. A. Mackenzie: The Artificial Preparation of Active Bacillus Hydroxybutyric Acid of Urine.—Mr. S. G. Hedin: Proteolytic Enzyme of Fibrin. Specimens:—Dr. A. Macfadyen: Experimental Tuberculosis in a Monkey.—Mr. A. Moore: Apparatus for Sub-cultivating Microscopic Cultures.

WEDNESDAY (6th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by the President, Mr. Bland-Sutton, Dr. Handley, Dr. Lewers, Mr. Doran, and Dr. Galabin. Paper:—Mr. A. Doran and Dr. C. Lockyer: Sloughing Fibroid of the Left Uterine Cornu, Abnormal Relations.

THURSDAY (7th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M. Mr. B. Browne: Twenty-five Years' Experience of Urinary Surgery in Children. (Harveian Lecture.)

RÖNTGEN SOCIETY (20, Hanover-square, W.).—8.30 P.M. Mr. H. Jackson. Presidential Address.

CHILDHOOD SOCIETY (Library of the Sanitary Institute, Margaret-street, W.).—8 P.M. Lecture.

NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital).—4 P.M. Clinical cases will be shown by Dr. Tresilian, Dr. Willoughby, Dr. Whiting, and others.

FRIDAY (8th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Mr. B. G. Moynihan: The Operative Treatment of Cancer of the Pyloric Portion of the Stomach.—Mr. T. H. Morse: Case of Intracranial Section of the Second and Third Divisions of the Trigeminal Nerve for Severe Neuralgia.—Mr. W. Haward: A Case of Fragilitas Ossium.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—Dr. A. H. Thompson: Section of Orbital Tumour (? Endothelioma ? Adeno-sarcoma).—Mr. E. Nettleship: Chronic Serpiginous Ulcer of Cornea (Mooren's Ulcer).—Dr. W. E. Thomson: Three Cases of Keratitis in the New-born occurring after Instrumental Delivery and Resulting in each case in an almost identical Rare Form of Opacity.—Dr. C. O. Hawthorne: On Intra-cranial Thrombosis as the cause of Double Optic Neuritis in Cases of Chlorosis.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (11, Chandos-street, Cavendish-square, W.).—4 P.M. Annual General Meeting.—Communications will be read and cases shown by the President, Mr. L. Browne, Dr. Abercrombie, and Mr. Nourse. 5 P.M. Address:—The President-Elect (Dr. J. Macintyre, Glasgow): The Application of Physical Science to the Surgery of Diseases of the Throat and Nose.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (4th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. R. Crocker: Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Edwards: Electrical Examination of the Bladder and Urethra.

TUESDAY (5th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. J. S. Bury: Prognosis in Relation to Disease of the Nervous System. (Bradshaw Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Taylor: Clinique. (Medical.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. A. Turner: Locomotor Ataxy.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Minor Surgery.

WEDNESDAY (6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Cantlie: Clinique. (Surgical.)

LONDON THROAT HOSPITAL (204, Great Portland-street, W.).—5 P.M. Mr. Waggett: Diseases of Accessory Sinuses. (Post-Graduate Course.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Latham: The Early Diagnosis of Pulmonary Tuberculosis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Eccles: Surgical Anatomy.

THURSDAY (7th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Fennell: Clinical Demonstration.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Green: Cases in the Wards. (Post-Graduate Course.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Edwards: Electrical Examination of the Rectum.

FRIDAY (8th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. T. Collins: Clinique. (Eye).

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Saunders: Therapeutics.

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IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 31st, 1901.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Oct. 25	30·05	W.	0·03	58	53	44	44	45	Overcast
,, 26	30·13	S.E.	...	70	53	39	39	40	Foggy
,, 27	30·37	S.W.	...	82	56	36	40	40	Fine
,, 28	30·18	S.W.	...	94	63	40	52	52	Cloudy
,, 29	29·98	S.W.	...	61	57	52	53	54	Overcast
,, 30	30·19	N.E.	0·01	79	57	51	50	53	Fine
,, 31	30·25	E.	...	88	56	47	44	50	Fine

During the week marked copies of the following newspapers have been received:—*Western Daily Press, Bristol Mercury, Westmorland Gazette, Liverpool Courier, Building News, Revue Scientifique, Sunday Times, Yorkshire Post, Liverpool Daily Post, Reading Mercury and Oxford Gazette, Windsor and Eton Express, Hertfordshire Mercury, Philadelphia Evening Telegraph, Wiltshire County Mirror, British Sanitarian, Leeds and Yorkshire Mercury, Blyth News, Local Government Chronicle, Public Health, Sanitary Record, Globe, Leeds Post, County Press (Bristol), Oxford Times, Belfast News Letter, Wiltshire County Express, Swansea Daily Leader, Northern Whig (Belfast), Worksop Guardian, St. James's Gazette, &c.*

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